KANANASKIS COUNTRY
Sub-Regional Integrated Resource Plan

Alberta
FORESTRY

KANANASKIS COUNTRY
SUB-REGIONAL
INTEGRATED RESOURCE PLAN

Approved by the Economic Planning Committee of Cabinet on
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PREFACE

This planning document was prepared by involved government agencies and public consultants in recognition of the need for improved management of Alberta's lands and resources. It applies only to public lands within the Kananaskis Country Planning Area, and not to any private or federal lands.

The plan presents the Government of Alberta's resource management policy for the public lands and resources within the area. It is intended to be a guide to resource managers, industry and publics having responsibilities or interests in the area, rather than a regulatory mechanism. Resource potentials and opportunities for development are identified to assist in the economic progress of Alberta. The plan is sufficiently flexible so that all future proposals for land use and development may be considered. No legitimate proposals will be categorically rejected. The provincial government is committed to serving Albertans. Should a proposal not be in keeping with the provisions of the plan, every means will be taken to explore alternative means for accommodating the proposal in a more appropriate location, either in this planning area or on other public lands. Rejection of any proposals will be done in writing by the Minister of Forestry or his designate.

An outline for implementation will be provided for this sub-regional plan to identify implementation actions and roles. This outline will also provide for the continuing review of the plan to accommodate changing needs and situations. Wherever possible, the private sector will be provided the opportunity to be actively involved in the operational delivery of the plan.

While the plan identifies resource potentials and opportunities, the realization of these may require the dedication of major amounts of public funds. Implementation is to be subject to normal budgetary approval process with overall priorities to be established with consideration of opportunities in other planning areas and areas currently outside the planning process. The private sector will be given the first opportunity to provide any development required.

This plan has no legal status and is subject to revisions or review at the discretion of the Minister of Forestry.

HIGHLIGHT SUMMARY

Kananaskis Country is located southwest of Calgary and encompasses approximately 4 160 km^2. The area has a varied landscape with high mountains and broad valleys in the west and rolling foothills in the east.

The Kananaskis Country Integrated Resource Plan resolves resource use conflicts and will serve as a positive and practical guide for the allocation, use and coordinated management of a wide range of natural resources. While of primary benefit to provincial government agencies with resource management responsibilities, the plan's provisions will also be of interest to the private sector and the general public.

The plan is a complementary extension of both A Policy for Resource Management of the Eastern Slopes and the Policy for Recreation Development of Kananaskis Country. The plan confirms the priorities for watershed protection and recreation development established in these two policies, while providing a guide for the management of such natural resources as timber, forage and natural gas.

The plan establishes broad management objectives which apply to the entire planning area. These are further refined for each of five smaller resource management areas. Management guidelines have also been developed and the zoning from the Eastern Slopes Policy has been revised based on new and more detailed resource information and policy direction.

The management intents for the five resource management areas are as follows:

Kananaskis/Spray - protection of watershed, terrain and wildlife habitat. Non-mechanized commercial and public recreation will be the major development activity.

Upper Elbow/Upper Sheep - retention of its "wildland" character. Only dispersed activities which entail no significant surface disturbance will be allowed.

Elbow/Jumpingpound - management and development of natural resources, including timber, forage, natural gas and recreation.

Sheep/Threepoint - conservation of the fisheries and wildlife resource will be of high significance as this area contains large portions of regionally significant habitat. Timber harvesting, natural gas exploration, grazing and recreation will also occur.

Highwood - protection of watershed, aesthetic and wildlife resources. Resource and recreational development will be limited because of the high provincial significance of this area to wildlife.

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1. INTRODUCTION

The Kananaskis Country Planning Area (see Figure 1) is a 4 160 km^2 tract of land southwest of the city of Calgary. It includes some of the most spectacular alpine scenery in Alberta as well as areas of foothills landscape. Due to its proximity to Calgary and its diverse terrain, vegetation and wildlife, the planning area has been one of the most heavily used recreation areas in Alberta. The recognition of these values led the Alberta Government to announce in 1974 its intention to create Kananaskis Provincial Park.

The planning area is in the Eastern Slopes Region of the province covered by A Policy for Resource Management of the Eastern Slopes (Eastern Slopes Policy). This policy was originally approved in 1977 and amended in 1984. The Eastern Slopes Policy reinforced the importance of the area for recreation by zoning much of the area for protection of the environment or development of recreational facilities.

In 1977, the province also announced the Policy for Recreation Development of Kananaskis Country (Kananaskis Country Policy). Based upon the zoning from the Eastern Slopes Policy, this policy was intended to direct orderly recreation development in such a manner as to allow the integration of the widest possible range of recreation opportunities while ensuring the preservation of valuable scenic resources and allowing for the development of the natural resources.

The Eastern Slopes Policy also states that integrated resource planning, conducted under a comprehensive interagency approach, is the key to implementing the policy's regional land use priorities and guidelines and to effective management of resources in the Eastern Slopes. The Resource Integration Committee[1] approved the planning area as a priority for integrated resource planning in April, 1979. This was based on the need for the formulation of an overall future development strategy in Kananaskis Country, incorporating resource capabilities and limitations with recreational use and demands. While the Kananaskis Country Integrated Resource Plan is guided by and is consistent with the Eastern Slopes and Kananaskis Country Policies, it supersedes them in terms of

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[1]Resource Integration Committee - A first-level approvals body consisting of directors from various provincial government departments and responsible for supervising and monitoring the integrated resource management planning program.

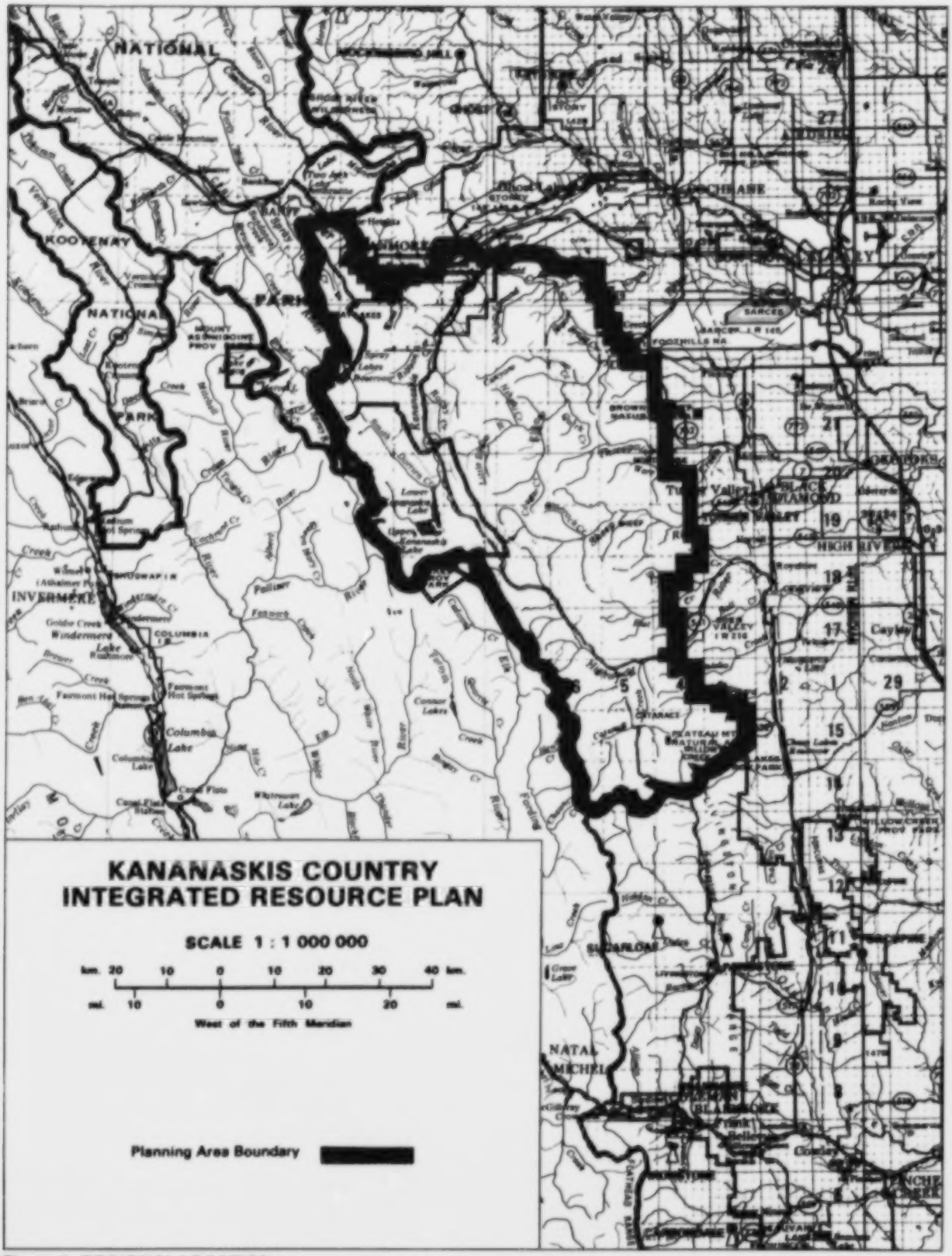

Figure 1. REGIONAL LOCATION

providing direction for government management of the planning area at the sub-regional level. The operational planning components of these policies remain in effect.

An interdepartmental planning team was formed under the direction of the Resource Planning Bran h of Alberta Energy and Natural Resources (ENR). The planning team, composed of agencies in ENR (Alberta Forest Service, Fish and Wildlife Division, Mineral Resources Division) and Alberta Recreation and Parks (Recreation Development Division, Parks Division), had as its first task the preparation of a Terms of Reference documents. This document, approved by the Resource Integration Committee in January 1980, defined the boundaries of the planning area[2], the planning process and methodology to be used, and the goals to be achieved.

The next step of the planning process was the collection and analysis of data. The planning team analysed and evaluated the resources of the Kananaskis Country Planning Area in terms of the present use of and demand for each resource, the capability to sustain levels of use, the potential for future development and the objectives and policies of the participating agencies. Based on this assessment, the team moved into the next step of the planning process: management policy formulation. The team developed a set of broad management objectives[3] for the planning area and a number of management options[4] to achieve these objectives. These options were presented to the Resource Integration Committee which selected a direction for resource management in the area. This Resource Management Policy was released in August 1982 and was subject to public and governmental review.

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[2]The boundaries of the planning area which have been revised several times since the Terms of Reference are currently defined as follows:
-- The western boundary follows the Alberta-British Columbia provincial border and the eastern boundary of Banff National Park.
-- The northern boundary follows the northern boundary of Improvement District 5.
-- The eastern boundary follows the Green Area-White Area boundary.
-- The southern boundary follows the southern boundary of Improvement District 5.

[3]Broad management objective -- A comprehensive yet general statement of a desirable condition or state for an individual resource sector, which provides direction for management action.

[4]Management option -- A set of objectives and basic strategy for their implementation (zoning scheme) for the management of various resource sectors.

The next step of the planning process was the preparation of a Draft Plan. In formulating this document, the planning team further revised and refined the objectives and zoning for the planning area based on the public and governmental reaction to the Resource Management Policy. The Draft Plan also contained resource management guidelines[5] which were developed to provide additional direction for the achievement of the objectives. The guidelines indicate whether various land-use activities are permitted, not permitted or compatible[6] and indicate temporal, spatial, technological or procedural conditions under which permitted activities may occur.

The Draft Plan was released in October 1984 and was subject to a major review by various government departments and by the public. Based on reaction to the Draft Plan, the objectives, guidelines and zoning were again refined to produce the present document. This Final Plan is intended to be used by government, industry and the public. It applies only to land and resources vested in the Crown. Patent lands within the planning area remain under the traditional planning control of the local municipality.

The Final Plan contains in Section 2 the broad management objectives which apply to the entire planning area. Because of the large geographic extent of the planning area and the complexity of the landscape and resource management concerns present, the planning area has also been divided into five smaller areas called resource management areas.

The resource management areas identify broad units of land within the planning area which have distinct management intents, and specific management objectives[7]. A zoning scheme to facilitate the

---

[5]Management guidelines -- A statement of direction which guides resource management action and resource use activities.

[6]Compatible -- Uses that will be allowed under normal guidelines and land-use regulations.

Not Permitted -- Uses that are not compatible with the intent or capabilities of the zone or resource management area.

Permitted -- Uses that may be compatible under certain circumstances and stricter than normal controls.

[7]Specific management objective -- A clear, concise statement of a desirable condition or state for an individual resource sector which can be achieved through management action.

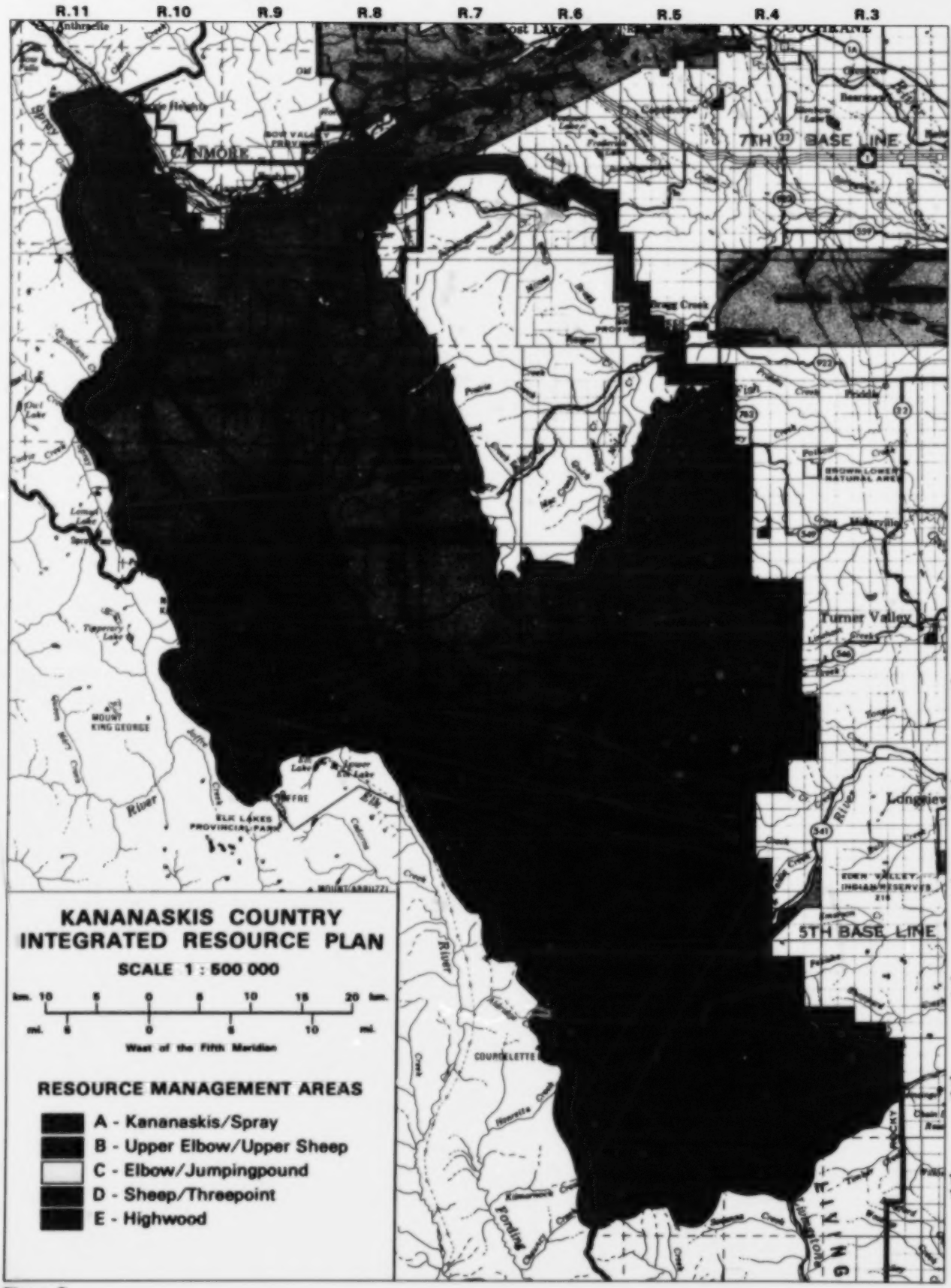
resolution of conflicts was also developed for each resource management area. This zoning is a modification of the regional zoning established in A Policy for Resource Management of the Eastern Slopes. Intent statements for the eight zones used can be found in the original Eastern Slopes Policy and in the appendix to this document.

The resource management areas, which are illustrated on Figure 2, are:

Resource Management Area A - Kananaskis/Spray
Resource Management Area B - Upper Elbow/Upper Sheep
Resource Management Area C - Elbow/Jumpingpound
Resource Management Area D - Sheep/Threepoint
Resource Management Area E - Highwood

The specific management objectives, zoning configuration and management guidelines for these resource management areas is presented in Sections 3 through 7 respectively. It is intended that these objectives and guidelines will allow for the appropriate utilization of the diverse resource base within the Kananaskis Country Planning Area.

The Final Plan outlines, in Section 8, the structures and procedures necessary to implement, review and amend the Kananaskis Country Integrated Resource Plan.


R.11
R.10
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R.7
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Tp. 25
Tp. 24
Tp. 23
Tp. 22
Tp. 21
Tp. 20
Tp. 19
Tp. 18
Tp. 17
Tp. 16
Tp. 15
Tp. 14
7TH BASE LINE
5TH BASE LINE
CANMORE
Turner Valley
Longview
KANANASKIS COUNTRY
INTEGRATED RESOURCE PLAN
SCALE 1 : 500 000
km. 10 5 0 5 10 15 20 km.
mi. 5 0 5 10 mi.
West of the Fifth Meridian
RESOURCE MANAGEMENT AREAS
A - Kananaskis/Spray
B - Upper Elbow/Upper Sheep
C - Elbow/Jumpingpound
D - Sheep/Threepoint
E - Highwood

Figure 2.

2. PLANNING AREA RESOURCE MANAGEMENT DIRECTION

2.1 Resource Synopsis

The Kananaskis Country Planning Area contains some of the most important watersheds in Alberta. The headwaters of the Elbow River and a large part of the headwaters of the Bow River, the two rivers which supply Calgary, are in the planning area. Dams for hydroelectric power generation are located at Upper Kananaskis, Lower Kananaskis, Spray and Barrier Lakes. Demand for high water quality throughout the area is significant because of the concentration of recreation activities along water courses and because of the excellent fisheries.

Relative to its size, Kananaskis Country contributes significant volumes of water to the Bow River Basin because of the high precipitation levels in the planning area. Precipitation generally increases with elevation and consequently the western, more mountainous portions of the planning area have the greatest precipitation accumulation and run-off. The western parts of the planning area also have more rocky and stable watersheds. Watershed sensitivity increases to the east in the foothill terrain where soils are more susceptible to erosion.

Except for one section of Green Area land (18-23-5-W5M) in the Municipal District of Rocky View, the planning area is synonymous with Improvement District 5. Improvement District 5 was established by the provincial government in 1983 to facilitate the management of Kananaskis Country which was created by the Kananaskis Country Policy in 1977. The purpose of the policy was to create a unique, high-quality recreation experience for Albertans, by maximizing the recreation opportunities of a large area of accessible, attractive landscape through the planned integration of a wide variety of recreational activities with other uses.

The "Country" concept permits:

-- The provision of high-quality facilities and programs which span the recreation opportunity spectrum;
-- The provision for normally incompatible recreation uses such as horse trails and all-terrain vehicles through a separation of uses and provision of special facilities;

-- The provision for controlled high service nodes such as service centres, overnight accommodation, and golf courses without destroying opportunities for wilderness recreation;
-- The protection of valuable ecological features and wildlife habitat;
-- The potential for participation by private enterprise and the integration of recreation facilities not normally provided by the public sector, such as alpine skiing;
-- The integration of recreation opportunities between traditional park areas and surrounding lands where controlled resource use may occur. Where conflicts do arise, priority may be assigned to different uses in different areas, depending on the regional context and the ability of the land base to support various activities.

To date, government sponsored recreational development includes the construction or upgrading of 28 auto access campgrounds (2 168 sites), 14 group camps (400 sites), 14 backcountry campgrounds (167 sites), six boat launches, 116 day use sites, 444 km of equestrian/ hiking trail, 298 km of hiking trails, 55 km of interpretive trails, 185 km of cross-country ski trails, 139 km of all-terrain vehicle (ATV) trails, 272 km of snowmobile trails, 23 km of bicycle trails and various major facilities such as information centres, interpretive centres, a special user facility and a golf course.

The Kananaskis Country Planning Area contains some of the most popular lake and stream fisheries in southern Alberta. The area is easily accessible and, because of its close proximity to the city of Calgary, is subject to intense angling pressure. There are several large lakes and reservoirs in the area which provide year-round angling, some stocked annually with trout and some which have self-sustaining game fish populations. The stream fisheries which are the most popular provide a variety of fishing opportunities. Small high- altitude alpine lakes provide additional angling opportunities. Cutthroat trout, bull trout, and mountain whitefish are indigenous to the area. Rainbow trout, brown trout and brook trout have been successfully introduced. A small population of arctic char was introduced into Chester Lake and lake trout were established in Spray Lakes Reservoir. Maintenance of the Bow River rainbow trout fishery, which is considered one of the most significant in North America, depends to a great extent on spawning within the Sheep and Highwood watersheds.

Fishing regulations pertinent to lakes in the planning area allow year-round fishing with daily and possession limits of 10 and 20

respectively for trout, except Spray Lakes Reservoir, which has daily and maximum possession limits of three lake trout. There is no limit on non-game species.

All high-mountain lakes except Rawson Lake and the Picklejar Lakes are open to year-round angling. Daily and possession limits for trout in high-mountain lakes are two and four. The Picklejar Lakes, which have a self-sustaining population of cutthroat trout are at present closed to angling. Rawson Lake also has special regulations since it is used as a brood stock lake to supply cutthroat trout eggs to the fish hatchery.

All streams are subject to Alberta's fisheries management program which permits annual open seasons on large rivers and alternate year openings on tributaries. All streams are closed to angling from November 1 to May 31 because fish congregate in over-wintering pools during this period and are vulnerable to exploitation.

Kananaskis Country is ecologically diverse and supports significant populations of wildlife. Species include elk, bighorn sheep, mountain goat, moose, deer, grizzly bear and black bear. Populations of furbearers, other small mammals, and upland game birds are also important locally. Three of the most significant critical wildlife wintering areas in the Eastern Slopes -- the Highwood Junction area, the Wind-Pigeon-Ribbon Creeks area, and the Evan Thomas area -- are located within Kananaskis Country. The Kananaskis Country Policy includes a commitment to maintaining and enhancing the fisheries and wildlife of the area.

Forest fire protection measures are most important to ensure the safety of the public who enjoy recreation or gain their livelihoods in and around the area and for the protection of natural resources. The planning area, for the most part, is located within the forest protection area and has experienced a high frequency of both human-caused and lightning-induced fires since 1980.

Forest protection measures, with respect to wildfires, involves a number of components including fire prevention, detection, and suppression. Fire prevention involves public education and direct contact with the public in an effort to prevent or minimize the risk of wildfires before they occur. This also includes fuel modification projects that are presently being undertaken in the Highway 40 corridor and may be considered throughout the planning area. Detection efforts include seven lookouts located at Barrier lake (formerly Pigeon Mountain), Mount Kidd,

Moose Mountain, Junction Mountain, Raspberry Ridge, Hailstone Butte and the Kananaskis Lookout southeast of Upper Kananaskis Lake. Lightning detectors located in the region provide accurate detection information as do regular aerial patrols. Kananaskis Country staff and the public, including local residents and visitors also play an important role in fire detection. Suppression efforts include the mobilization and deployment of initial attack crews generally located at the Kananaskis Boundary and Highwood Guardian Stations. Helitack crews are generally located at the Livigstone Gap or Elbow Ranger Stations with backup suppression resources based at the Jumpingpound Guardian Station when required. Air tanker bases are located at Calgary and Rocky Mountain House.

Much of the timber in Kananaskis Country is immature pine which resulted from major fires in 1936. Sawlogs, posts and poles constituted the bulk of the forest products from that time until 1966 when the quota system was introduced.

Kananaskis Country is currently managed under two forest management (F/M) units: the B1 F/M Unit (east of the Fisher and Highwood Ranges) and the B2 F/M Unit (west of the Fisher and Highwood Ranges). Most of the harvesting under quota has occurred in the B2 F/M Unit by Spray Lakes Sawmills (1980) Limited at an annual allowable cut (AAC) of 28 317 m^3 (1 000 MCF). In 1966, the quota (B2-Q2) was originally set to expire after 17 years in 1983 due to a substantial imbalance in the ageclass distribution in the B2 forest management unit. This would result in a lack of mature sawlog stands after the initial 17 years. Owing to the construction on Highway 40, harvesting was postponed from 1979-1981 and subsequently the B2-Q2 quota was extended until April 30, 1986.

At this time, there are no on-going quotas in the B1 F/M Unit. Most of the quotas that were established in 1966 were cancelled due to underproduction. The last quota was cancelled April 30, 1976. No new quotas were established because of perceived conflicts with the recreation development of Kananaskis Country and the resulting uncertainty of a defined permanent timber land base. Harvesting is occurring in the B1 F/M Unit under commercial timber permits (CTPs) and local timber permints (LTPs). There are four Miscellaneous Timber use (MTU) areas in B1 F/M Unit with a total AAC of 4 500 m^3 to supply local demand. The B1 F/M Unit has also been supplying the local heavy demand for Christmas trees.

The current demand for commercial timber comes from Spray Lakes Sawmills (1980) Limited, which requires a minimum of 25 950 m^3 a year, depending on its revised quota allocations within forest management units to the north. The local, non-industrial demand is 4 500 m^3.

The permanent timber land base that has been established through the refinement of the Eastern Slopes zones and through more specific land use allocations is 85 359 ha (210 920 acres). This sustained yield land base is comprised of Eastern Slopes zones 2, 4 and 5, excluding recreation reservations. Effective May 1, 1986, the B1 and B2 F/M Units will be amalgamated to form the B7 F/M Unit with an AAC of 83 840 m^3 (net), calculated at a 15 cm stump and an 11 cm top utilization standard. A forest management plan for the B7 F/M Unit is expected to be approved in 1986. A lack of mature timber will require a depressed cut for the next 20 years until a more balanced age class is achieved.

Within the planning area there are 14 complete grazing allotments and three partial allotments. Of the three partial allotments, the Savanna Creek allotment will be addressed within the Livingstone-Porcupine Hills Integrated Resource Plan. The set carrying capacity of the other allotments in 1977 was approximately 23 500 animal unit months (AUMs). Actual use figures may vary on an annual basis depending on range condition. There is a commitment by the Government of Alberta to maintain the 1977 grazing level within the Kananaskis Country Planning Area.

Range capacity has steadily declined over the last 30 years as a result of brush and forest encroachment and the designation of land to other uses. A rapid increase in recreation facility and road developments, as well as natural vegetation succession, has resulted in significant losses of rangeland since 1977. Present forage production estimates indicate range within the Green Area being capable of supporting approximately 20 000 AUMs allowing a 50 per cent carry over for wildlife and plant root reserves. Range improvement will be required to re-establish the range to a condition capable of supporting grazing capacities as they were in 1977. An estimated 1 820 to 2 430 hectares (4 500 to 6 000 acres) is required for range improvement purposes. In addition, to utilize the range resource fully, a degree of livestock redistribution may be required. Achieving this will be complicated by the allocation of land to other priorities, notably roads, recreation and wildlife. An estimated 4 940 hectares (12 200 acres) have been identified within Zones 2, 4 and 5 which have potential for range improvement.

Under A Coal Development Policy for Alberta (Coal Policy), approved by the provincial cabinet in 1976, the bulk of the planning area is classified as Category 1 in which coal exploration and development activities are not allowed. The exceptions are two areas in the south half of the planning area which are Category 2 and a smaller area adjacent to the Canmore Corridor which is Category 4. Limited exploration under strict controls is allowed in Category 2 with development by underground or in situ methods being considered. In Category 4, exploration and development are allowed under normal approval procedures.

In March 1978, the Minister of Energy and Natural Resources directed that there be no new dispositions for coal in Kananaskis Country. This, in effect, enlarged the area of Category 1 by further restricting the area available for coal exploration and development activities in the planning area.

Several mines were operated in the past but there are no current activities. Remaining recoverable reserves within the planning area are estimated to be about 143 megatonnes mainly from the Kootenay Formation. Numerous leases exist throughout the planning area, mostly situated in association with the known coal deposits and fields.

Petroleum and natural gas activities have generally been limited to the area east of the Fisher and Highwood Ranges where geological structures are generally considered to be more prospective in terms of their hydrocarbon bearing potential. With the establishment of Kananaskis Country, all mineral activity was suspended. This was subsequently amended by ENR Information Letter 80-12 to allow petroleum and natural gas activities to continue in a restricted manner east of the Fisher and Highwood Ranges.

Currently there are four designated natural gas fields within the planning area: Moose Mountain, Whiskey, Quirk Creek and Savanna Creek. Two of these fields are producing and approval has recently been granted to bring the remaining two into production. Throughout Kananaskis Country, 64 wells have been drilled to date, of which 30 are producing, capped or potential gas wells and 34 are abandoned. The potential is high in the eastern half of the planning area for additional geophysical and drilling programs in order to assess and recover the natural gas resource.

Two undeveloped quarriable mineral leases are situated within Kananaskis Country, adjacent to the Canmore Corridor. The minerals of interest are limestone and sandstone since several quality outcrops of both occur here in close proximity to a major transportation corridor. Interest has also been expressed for metallic minerals over an extensive area at the south end of Kananaskis Country. An application for a quartz mineral exploration permit was submitted in 1981. In April 1985, a metallic mineral exploration permit was issued over a much reduced area of the original application. Activities on this permit area have yet to begin.

2.2 Broad Management Objectives

This section of the Draft Plan defines the broad management objectives which have been established for the planning area as a whole. They have been expressed alphabetically as they relate to a particular resource, not to any specific agency. No priority is implied by the order of objectives. Priorities are listed following the objectives.

The underlying policy of all agencies reponsible for the implementation of the plan will be to ensure that the utilization and development of the resources of the planning area occur in a manner consistent with principles of conservation and environmental protection.

Ecological Resources

To identify and protect both representative and unique landscapes and waterways of natural (environmental or scenic) provincial significance for the recreational, scientific and educational use of Albertans.

Fisheries Resources

To maintain viable fish populations to provide an optimum mix of social and economic benefits by:

- -- maintaining optimum instream flows for fish;
- -- maintaining or increasing naturally reproducing fish populations and establishing new populations in suitable locations;

-- maintaining or increasing the quality and quantity of aquatic habitat, including protection of migratory routes, spawning areas, overwintering areas and rearing areas which are critical to the survival of specific fish populations;
-- enhancing or creating fish habitat in appropriate locations.
-- providing a variety of angling opportunities by enhancing the diversity of fish species available, angling methods and angling locations;
-- providing a success rate of 0.3 fish per angler hour on naturally reproducing populations and high-altitude lakes and 0.5 fish per angler hour on productive stocked lakes.

Heritage Resources

To identify historic, pre-historic and paleontologic resources, to protect them from adverse effects of development programs and projects, and to manage these resources for scientific, educational and recreational purposes.

Interpretation and Environmental Education

To enhance visitor awareness, appreciation, understanding and enjoyment of Kananaskis Country's resources.

To promote public understanding of resource management and those agencies involved in Kananaskis Country.

To sponsor protection of the resource through education.

To promote environmental education opportunities.

Mineral Resources

To provide opportunities for the orderly exploration and development of petroleum and natural gas resources in a manner compatible with the recreational objectives for Kananaskis Country and with environmental considerations.

Range Resources

To maintain the forage land base in good condition for the protection of watershed values and for use by domestic livestock and wildlife through on-going operations and maintenance programs.

To provide a forage base within the Green Area that will support domestic livestock use in accordance with the commitment to 1977 grazing capacities (23 500 AUMs).

To manage domestic livestock within allotments to achieve uniform forage use and good range condition through cattle redistribution, as required, and intensified range management practices.

To promote the use of forage produced on cutblocks to supplement the range resource and to examine ways to optimize forage utilization and productivity.

Recreation

To achieve the intent of the Policy for Recreation Development of Kananaskis Country by providing a wide range of high-quality, accessible and affordable recreational opportunities and accommodations for a broad range of Albertans, including those who are physically, mentally or socially disadvantaged.

To preserve the environmental and aesthetic quality of Kananaskis Country and create recreational development that is expressive of the unique natural quality.

To minimize potential conflicts among recreational uses and conflicts between recreation and resource use activities.

To manage Kananaskis Country in a consistent manner which promotes a single identity for the area. This includes establishing a high-quality design reflective of a common theme and promoting a single identity for public facilities.

To operate Kananaskis Country efficiently, effectively and economically to protect and maintain the considerable capital investment in recreational facilities. Included is the provision of consistent standards of service throughout Kananaskis Country.

To involve the private sector in the development and operation of facilities and services where a viable business opportunity exists, consistent with the intent of Kananaskis Country.

Research

To maintain the necessary land base for existing research projects and to accommodate new research programs.

Timber Resources

To manage the permanent timber land base within the Green Area on a sustained yield basis to provide a continuous supply of timber to wood utilizing industries and local residents.

To protect the forest from insects and disease and to keep the annual wildfire loss of productive or potentially productive forest land to 0.1 per cent or less.

To reclaim and reforest disturbed land according to existing provincial regulations and policies.

Tourism

To develop parts of Kananaskis Country as a major year-round travel destination area for Albertans.

To provide information and orientation to the public.

To encourage the provision of opportunities for private-sector development and management of recreation and tourism services and facilities to service the travelling public.

Transportation

To provide adequate access to serve the recreation and resource users of Kananaskis Country.

Water Resources

To maintain water quality, quantity and flow regime as it relates to:

-- provision of water for instream and downstream users,
-- provision of habitat for fish and wildlife populations;
-- provision of quality recreational experiences;
-- minimizing of erosion and stream sedimentation.

Wildlife Resources

To maintain or enhance the numbers, distribution and diversity of native wildlife in Kananaskis Country. Efforts will be made to increase the amount and variety of interactions with wildlife for both consumptive and non-consumptive recreationists. Hunting and trapping activities will be maintained wherever possible.

2.3 Management Priorities

The following priorities are intended to give a broad indication of the government's management intent for the planning area. Priorities are refined to deal with smaller land bases and levels of planning. For example, the following list is refined from the priority listing in the Eastern Slopes Policy and is further refined for each resource management area within the planning area (see Sections 3 to 8). The priorities should be interpreted in conjunction with the management intent and objectives statements.

The general management intent for Kananaskis Country is multiple use, given the following management priorities.

1. Maintenance of water quality, quantity and flow regime.

2. Provision of a wide range of recreational, leisure and tourism opportunities.

3. Maintenance of the abundance, diversity, distribution and recreational use of the fish and wildlife resource.

4. Provision for the management and development of renewable and non-renewable natural resources, including range, energy, timber and fur resources.

5. Protection of historical and archaeological resources and protection of selected representative and unique areas of natural interest.

6. Maintenance and encouragement of research, education and interpretation programs.

2.4 Management Guidelines

These management objectives and priorities can be partially achieved in the Kananaskis Country Planning Area through a number of resource management guidelines. These guidelines which are applicable throughout the planning area are as follows:

General

1. All operational activities must be processed in accordance with A Policy for Resource Management of the Eastern Slopes; Revised 1984.

2. All operational activities must be processed in accordance with procedures set out in the Internal Referral Systems of Alberta Energy and Natural Resources and with procedures to be developed by the management authority for Improvement District No. 5.

3. Activities involving surface disturbances may require historical resource impact assessments as outlined in The Alberta Historical Resources Act.

4. Forest fire protection measures will continue to be undertaken throughout the planning area in accordance with the "Kananaskis Country Fire Management Plan." The use of fire prescribed for land or resource management purposes will be strictly controlled and monitored according to fire management policy.

   Resource and land development proposals or projects will include fire protection assessments as part of the internal referral systems of the provincial government. Assessments will address public safety aspects and risk management associated with the size and location of developments within the forest protection area. Consultative services with respect to forest fire protection measures will be available to ID 8, MD 44, MD 31, ID 6 and the Town of Canmore adjacent to the forest protection area.

Ecological Resources

1. An inventory of ecological resources and resource considerations will be prepared. This information will be used during the referral procedure and development of operational programs.

2. Seed mixtures for reclamation, grazing improvement, recreation developments and other purposes will be selected to achieve the objectives of the dominant land use practice to occur. Consideration will be given to the zoning and intent. To prevent introduction of primary and secondary weeds, all seed batches will be analyzed to ensure that only minimal amounts of easy to control annual weed seeds are included. Weed introductions will be controlled or eliminated as specified by the Alberta Weed Control Act and Regulations.

Fisheries Resources

1. Angling regulations will require regular review in relation to angler use, harvest levels and fish population conditions to ensure the long-term survival of naturally reproducing resident sportfish populations, particularly bull and cutthroat trout.

2. Periodic angler surveys will be required on lakes and streams to measure recreational use and fish harvest.

3. Fish stocking programs which may create demands for recreational facility development will be referred to the recreation management agency. When consistent with the resource management intent for the area, access and minimal facilities may be developed through the Fish and Wildlife Division access program.

4. Alpine and subalpine lakes will be managed according to the "Alberta High Mountain Lakes Fisheries Management Program".

5. Detailed fisheries management plans will be developed for major lakes, reservoirs and all drainages with naturally reproducing gamefish populations.

6. Fisheries will be developed and critical areas protected for naturally reproducing gamefish populations through the Buck for Wildlife Program and in co-operation with other agencies.

Interpretation and Environmental Education

1. Reservations will be placed on proposed environmental education sites.

2. Interpretation and environmental education personal services programming will be encouraged throughout Kananaskis Country.

3. Interpretation and environmental education non-personal programming facilities will be consistent with the philosophy of the "Interpretive Development Plan" and the "Environmental Education Report".

Mineral Resources

1. No new dispositions for coal, quarriable or metallic minerals will be issued in Kananaskis Country. Exploration and development of existing dispositions will not be approved by the provincial government.

2. Dispositions for petroleum and natural gas will be considered in the area east of the McConnell Fault[8] as well as throughout the Cataract Creek Forest Land Use Zone[9], provided that the intended activity is in accordance with the zoning configuration and the management guidelines for that area. In the remainder of the planning area petroleum and natural gas will remain withdrawn from disposition.

3. Oil and gas exploration will generally not be permitted in Zone 1. However, "step-out" drilling may be permitted in Zone 1 so that an oil or gas pool (discovered prior to implementation of the Eastern Slopes Policy in 1977) can be developed to the point of recovering the reserves in place. Geophysical activity may be permitted in Zone 1 on a very limited scale and under stringent operating conditions where localized geophysical activity is required to determine a "step-out" location.

   New petroleum and natural gas dispositions will also be considered in Zone 1 for lands for which drilling prior to July 1977 has identified the existence of petroleum or natural gas. Where this existence was not identified, dispositions, in Zone 1 near zones where petroleum and natural gas exploration and

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[8]The McConnell Fault is a prominent geologic feature trending in a NW-SE direction through the planning area, which generally demarcates the two major physiographic regions in Kananaskis Country: foothills to the east and mountains to the west.

[9]The Cataract Creek Forest Land Use Zone is the southernmost portion of the planning area. Its northern boundary is Baril Creek and the median line of Township 16 in Ranges 4 and 5.

development is a permitted use, may be granted with the stated restriction that surface access will not be granted for lands which fall within Zone 1. Such a restriction will be identified in an addendum to the sales notice.

Applications for mineral surface leases will continue to be handled using the referral system currently in place and applications may be approved in Zone 1 where adequate environmental protection can be ensured.

4. The placement and configuration of clearings for petroleum and natural gas wellsites will minimize visual impacts. After abandonment, wellsites will be contoured to the landscape.

5. Petroleum and natural gas exploration and development programs are subject to the restrictions and conditions outlined in the ENR Information Letter 80-12 and any successors.

Range Resources

1. The condition of the range will be improved to provide the required forage base. A combination of range improvement, redistribution of cattle and more intensive range management will be required to meet range resource requirements. Forage production on range improvements will be monitored to assess their contribution to the forage base.

2. Existing range management plans for resource management areas C, D and E will be revised on a priority basis relative to their effectiveness and allotment conditions. Upon completion, range management plans will be updated every five to ten years.

3. Range management plans containing provisions for improvement projects for allotments affecting Zone 2 and Zone 4 will be developed in accordance with the intent of those zones. Range improvement for domestic grazing within Zone 2 will be accomplished considering wildlife habitat enhancement as a complementary benefit.

4. Range improvements will generally be conducted on suitable areas of brush or aspen vegetation with minimal disturbance to coniferous growing stock and wildlife habitat.

5. Domestic grazing will generally be allowed to continue in recreation areas to remove annual forage production where forage capability warrants this use. Cattle will be excluded during peak recreational use periods and may be prohibited in selected campgrounds and day use areas depending upon the timing and intensity of recreational and range uses.

6. Range objectives are to be achieved using primary rangelands and range improvements prescribed in range management plans. Range improvements such as prescribed burning, herbicide application and mechanical clearing for domestic and wild ungulate range improvement purposes will be considered on a site specific basis. The use of recently logged areas as temporary range will be considered on a site specific and interim basis to supplement existing range resources.

7. Potential increases in carrying capacities, and subsequent stocking rates, will be assessed and implemented through revised range management plans considering other land use objectives and the long term maintenance of good range conditions.

Recreation

1. Recreation facilities will be provided for a great variety of uses according to the capability of the land base and according to present demand and anticipated future use.

2. In order to complement and not duplicate existing developments, the recreational development of Kananaskis Country will be co-ordinated with the facilities and programs available in the surrounding areas. This will include trail systems, traveller information services, sanitation and other municipal services, emergency services and housing requirements.

3. Recreational use and facility development will be grouped wherever possible.

4. New private-sector developments including those by clubs and similar organizations will be compatible with the recreation intent of the area, and will be operated as public facilities. The developments will be on a long-term lease or concession basis, with the land remaining the property of the Crown.

5. Areas suitable for recreation development and areas with facilities that are not protected through order-in-council will be protected through a holding reservation.

6. Trails and facilities will be designed so they do not damage important aesthetic, wildlife and biologically sensitive areas.

7. Recreation activities, such as snowmobiling and all-terrain vehicle use, that would conflict with other recreational uses will have areas set aside for them.

8. Recreation use will be monitored for negative impacts on other recreationists and the natural resources. Recreational impacts may be managed through a variety of methods, of which educational techniques and impact management rather than regulations or use limitations will be the preferred management approach.

9. An architectural theme has been established for major and minor buildings in Kananaskis Country. New developments will be consistent with this theme.

10. The size of visitor and staff accommodation nodes will be regulated to ensure that townsite developments, with associated municipal service requirements, do not occur, and also to create developments which are compatible with the outdoor recreation focus of the project. This guideline includes the principle that only the minimum number of staff required to manage and operate Kananaskis Country successfully will be accommodated on-site.

11. A backcountry management plan will be prepared to determine management approaches to recreation impact, recreation activities, public safety (specifically water hazards, avalanche hazards and bear hazards) and public education.

Research

1. Natural resource and recreational research will be encouraged.

2. Specific restrictions on scientific study will depend on the actual project or program envisaged and guidelines will be developed as these are identified. Scientific study must be compatible with the management intent and zoning. Appropriate

permits and guidelines will be required to comply with legislation and government policies. Agencies with permit systems include Fish and Wildlife, Recreation and Parks, Culture, and Alberta Forest Service. In addition, public surveys conducted by government agencies must be reviewed by Cabinet.

Timber Resources

1. Forest management plans will integrate harvesting and reforestation with other land use activities such as recreational developments, watershed management, range improvements or fish and wildlife habitat improvements.

2. Landscape logging and other aesthetic harvesting practices and access development will be conducted throughout Kananaskis Country.

3. Sanitation logging will be permitted in Zone 1 and elsewhere where necessary to prevent the spread of disease or insects which may affect the merchantability of timber within the permanent timber land base.

4. Timber harvesting will be done in a manner that will not have detrimental effects on forage production or cattle management (e.g., avoid use of primary grasslands for landings or roads, avoid cutblock configurations that will hinder good cattle management).

5. Intensive silvicultural practices including the use of prescribed fire will be encouraged to ensure the maintenance of a healthy and stable forest environment, optimize forest production and favourably manipulate the forest fuel complex to reduce the risk of wildfire on selected areas within the forest land base.

Transportation

1. Roads and utilities will be designed and constructed to minimize resource and environmental damage and to ensure a high level of user safety.

2. Where it does not conflict with other objectives and guidelines, roads providing access to recreational developments or providing circular scenic routes will be designed and constructed to maximize the enjoyment of scenery.

3. Existing access should be used as much as possible in the development of operational activities.

4. Multiple-purpose access should be considered where possible in the development of operational activities.

5. All abandoned resource extraction roads will be reclaimed.

6. Highly visible and aesthetically obtrusive structures, such as telecommunications towers, will generally be discouraged in Kananaskis Country. Essential structures will be subject to strict guidelines and conditions to minimize their visual impact.

Water Resources

1. Operating restrictions on land-use activities related to clearing of vegetation (e.g., timber harvesting, range improvement) will be necessary to maintain an optimal balance in water yield and streamflow.

2. Road and trail contacts with streams will be minimized to lessen point sources of sedimentation.

3. Reclamation of land-use disturbances will occur expeditiously to reduce erosion and sedimentation. Whenever possible, reclamation will be carried out before spring run-off to reduce erosion.

Wildlife Resources

1. Hunting/trapping seasons, licences, permits, etc., will be managed to minimize conflicts between hunting/trapping and other resource and recreation users.

2. Hunting will occur in a manner providing maximum amount and variety of opportunities consistent with wildlife conservation.

3. Intensive management of wildlife and habitat will be required to maximize wildlife production.

2.5 Implications

The anticipated consequences of the provisions of the Kananaskis Country Integrated Resource Plan on the resources of the planning area are factors which were considered during the approval process. The number of potential implications arising from a plan of this scope are vast. Not all are foreseeable and many are of limited consequence. Accordingly, only those implications considered to be significant have been identified. Implications pertaining to the entire planning area follow while those related to each resource management area are specified in Chapters 3 through 7.

1. Acceptance of the Kananaskis Country Integrated Resource Plan indicates a provincial commitment to see the planning area developed as a multiple use area. In addition, both the watershed protection priority of the Policy for Resource Management of the Eastern Slopes and the recreational development priority of the Policy for Recreation Development of Kananaskis Country are maintained.

2. In order to achieve the resource management objectives and guidelines identified in the Final Plan, more intensive management will be required than in the past. This will include greater planning and monitoring efforts, and more interagency consultation and co-operation.

3. The zoning protects high water-yield areas, steep slopes and areas where soils are thin and vegetation is slow to recover from disturbances. Land use activities are concentrated on lower slopes and valley bottoms where recovery is quicker. However, these areas tend to have significance to wildlife and higher erosion potential, necessitating increased involvement of wildlife and watershed managers in developing and reviewing operational plans.

4. Revisions and refinements to the Critical Wildlife Zone to conform more closely to critical areas should ensure the achievement of fisheries and wildlife objectives. At the same time this may restrict other users. For example, the Critical Wildlife Zones on the Wind-Pigeon and Evan Thomas areas in Resource Management Area A limit the types and amounts of recreational development which can be considered and the Zone 2 on the Highwood Junction area restricts domestic grazing.

5. If domestic grazing commitments (1977) are to be honoured, a budgetary and staffing commitment toward range enhancement is needed. Similar commitments are needed for wildlife enhancement, watershed monitoring, etc.

6. A permanent timber land base is now established (with ratification of the recommended zoning within Resource Management Areas C, D and E) that will support local and commercial timber demands. A timber management plan is required to refine the annual allowable cut (AAC) based on age class distribution calculations, the revised zoning, and operational restrictions. Operational restrictions are expected to be more stringent to accommodate recreation, wildlife and aesthetic values.

7. The Kananaskis Country Integrated Resource Plan has addressed the compatibility of petroleum and natural gas exploration and development activities with the resource priorities, refined Eastern Slopes zoning and resource management area intents for the entire planning area. The plan recommends that in the area east of the McConnell Fault as well as throughout the Cataract Creek Forest Land Use Zone, petroleum and natural gas resources be open to disposition subject to compliance with the zoning and other guidelines for these areas. ENR Information Letter 80-12 will need to be replaced to portray the use of the McConnell Fault and the Cataract Creek Forest Land Use Zone in the integrated resource plan. Currently this information letter uses the Highwood and Fisher Ranges to distinguish the no activity from the permitted use areas.

8. There are approximately 68 sections of coal leases and portions of two quarrying leases and one metallic mineral exploration permit within Kananaskis Country. The recoverable coal reserves, according to Energy Resources Conservation Board statistics, total 143 megatonnes. Similar reserve statistics are not available for the quarriable and metallic minerals within the planning area. Owing to the high value placed on recreation opportunities, aesthetic surroundings and renewable resources, the plan directs that there will not only be no new dispositions for coal, quarriable and metallic minerals but also that development of the existing dispositions will not be approved. This policy direction implies that the resource potential of minerals such as limestone, sandstone, shale and gold will go unassessed, that 143 megatonnes of established coal reserves will be sterilized and that compensation claims from existing lessees can be anticipated.

9. Not all minerals in Kananaskis Country are under Crown control. About 65 km^2 are freehold mineral rights. Access to the freehold mineral rights will be denied under the plan's provisions. The only exception will be for petroleum and natural gas activities (where permitted by the revised zoning) on freehold mineral rights east of the McConnell Fault and throughout the Cataract Creek Forest Land Use Zone.

10. The level of detail provided varies greatly between resources, and between resource management objectives and guidelines. This is related to the detail submitted by the agencies involved in the plan and has resulted in some inconsistencies which will have to be dealt with during operations. Particularly difficult to deal with is the level of detail for the recreation resource, the number of agencies involved in the recreational field, and the degree to which the plan can guide future development and management.

11. In some cases the amount of range improvement required in the planning area may be reduced somewhat by redistributing cattle within allotments. This alternative will be further examined through revised range management plans.

12. If range improvement on suitable brush and aspen areas does not achieve the anticipated forage productivity or grazing capacity, then seeding to tame forage species and clearing coniferous stock may be examined as alternatives. The latter alternative would involve a slight acceleration of mature timber harvests rather than the removal of immature coniferous growing stock and would be specified in revised range management plans.

3. RESOURCE MANAGEMENT AREA A: KANANASKIS/SPRAY

3.1 Description

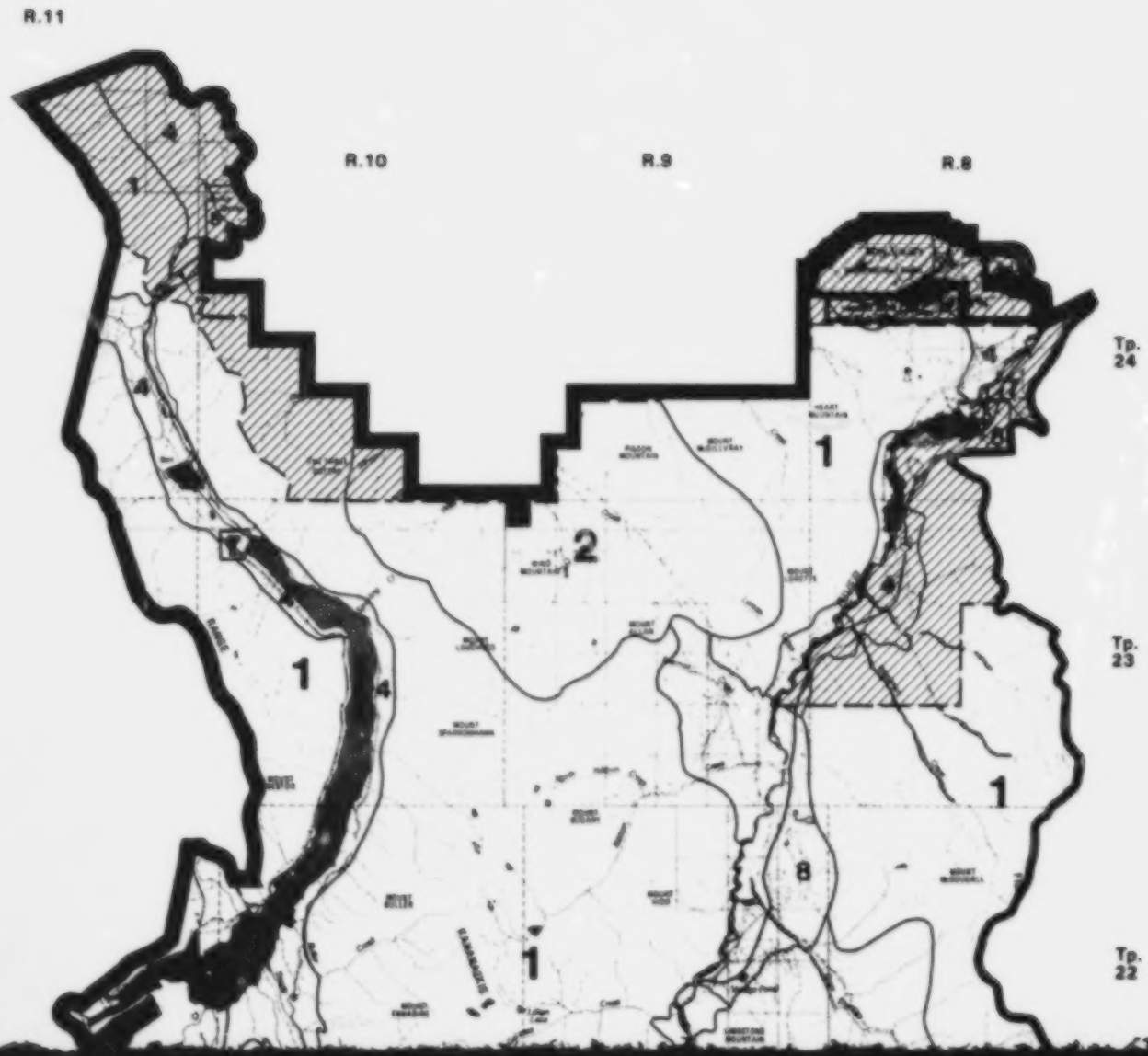
The boundaries of the Kananaskis/Spray Resource Management Area are defined as follows (see Figure 3):

- -- The western boundary follows the Alberta-British Columbia border and the eastern boundary of Banff National Park.
- -- The northern boundary follows the northern boundary of Improvement District 5.
- -- The eastern boundary generally follows the height of land marking the Kananaskis drainage on one side and the Jumpingpound, Elbow and Sheep drainages on the other. The exception is the Lusk Creek watershed of the Kananaskis drainage, portions of which are included in Resource Management Area C.
- -- The southern boundary follows the southern boundary of Peter Lougheed (formerly Kananaskis) Provincial Park.

This resource management area is characterized by mountains and mountain valleys exhibiting alpine and subalpine biophysical features. It is part of the Kananaskis and Spray drainages which, although they comprise only five per cent of the Bow River Basin, supply 17 per cent of the waterflow. The Barrier, Pocaterra, Interlakes, Three Sisters and Spray dams utilize this waterflow to generate hydroelectric power.

These power developments which cause fluctuations in the river level have had an impact on the fisheries and on recreational access to the backcountry. To provide fishing opportunities in the four reservoirs, stocking programs, usually of rainbow trout, have been instituted. As well, two enhancement projects are stocked with rainbow trout, and 14 alpine lakes are stocked with cutthroat trout. Spray Lakes Reservoir provides the only lake trout fishery in Kananaskis Country. The Evan Thomas ponds are used as brood ponds for brook and brown trout, and Rawson Lake is used as a source for cutthroat trout eggs.

The Kananaskis/Spray Resource Management Area is estimated to contain 58 megatonnes of remaining recoverable coal reserves, all from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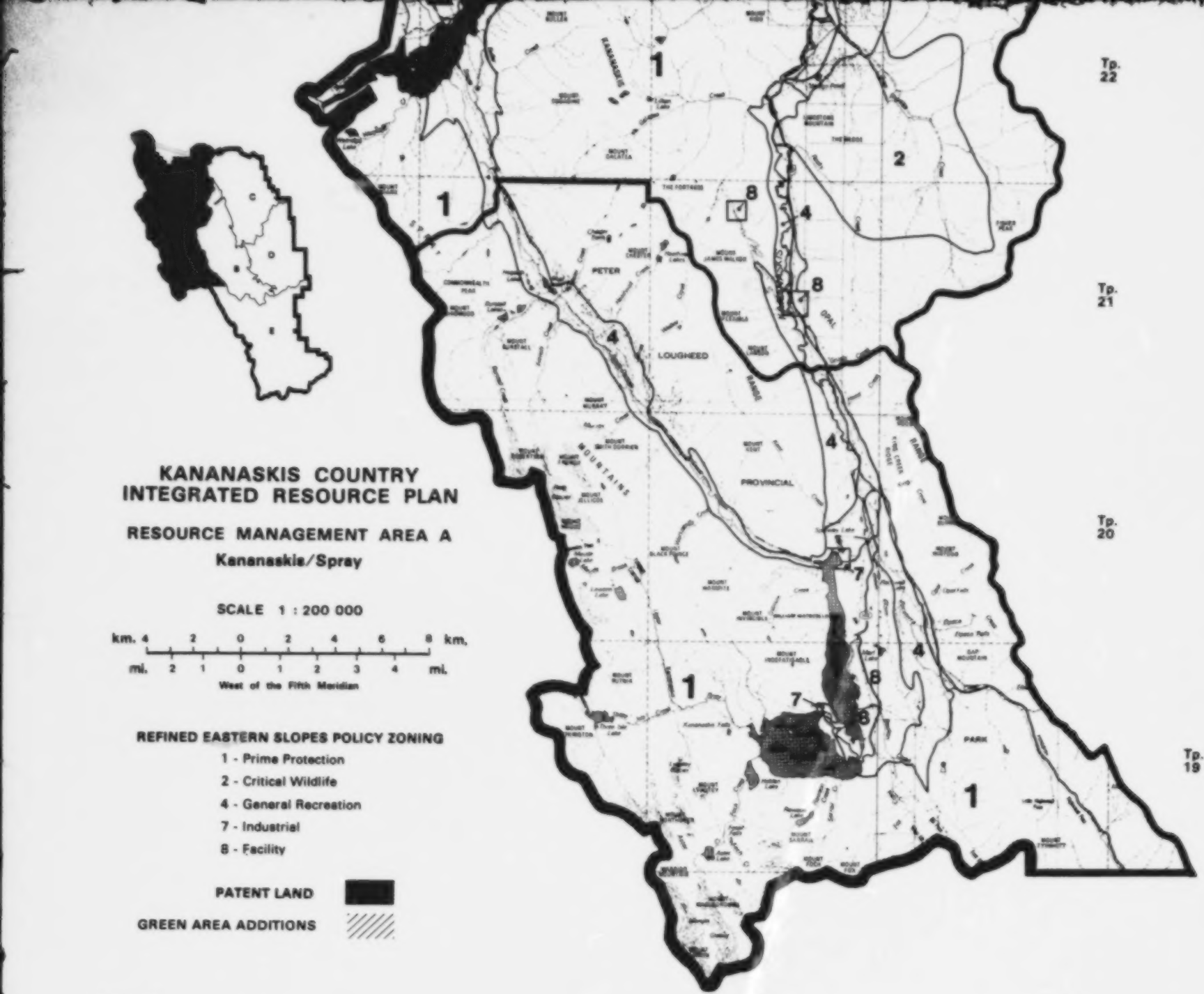
KANANASKIS COUNTRY
INTEGRATED RESOURCE PLAN
RESOURCE MANAGEMENT AREA A
Kananaskis/Spray
SCALE 1 : 200 000
km. 4 2 0 2 4 6 8 km.
mi. 2 1 0 1 2 3 4 mi.
West of the Fifth Meridian
REFINED EASTERN SLOPES POLICY ZONING
1 - Prime Protection
2 - Critical Wildlife
4 - General Recreation
7 - Industrial
8 - Facility
PATENT LAND
GREEN AREA ADDITIONS
Tp. 22
Tp. 21
Tp. 20
Tp. 19
PETER
LOUGHEED
PROVINCIAL
PARK

Figure 3.

Kootenay formation seams. These reserves are confined to less than 10 per cent of the resource management area's surface area and are associated with portions of the Canmore and Kananaskis coal fields as well as the Pocaterra and Ribbon Creek deposits. Coal leases are present over most of these fields and deposits. Three mines were once in operation, extracting coal from the Canmore field and the Ribbon Creek deposit. These have all been closed and no proposals have been received for new development.

Portions of two quarrying leases fall within the Kananaskis/Spray Resource Management Area. Developments on these leases have not taken place, even though quarrying for limestone, shale and sandstone are on-going activities in the adjacent Canmore Corridor.

Petroleum and natural gas activities are not occurring within the Kananaskis/Spray. The area is both west of the McConnell Fault where gas potential has yet to be proven, and west of the Fisher Range where petroleum and natural gas exploration and development is prohibited by policy (ENR Information Letter 80-12).

There is no domestic livestock grazing in this unit because of climatic and topographic limitations to forage production. The mountainous terrain and general elevation of the area also limits tree growth. Lower valley bottoms where the site capability for tree growth is adequate have generally been allocated for intensive and extensive recreation. Therefore, this resource management area has been excluded from the permanent timber land base.

The area has a history of timber harvesting dating back to the end of the 19th century. More recently, the area was part of the original timber quota (B2-Q2) allocated to Spray Lakes Sawmills Ltd. in 1966. Much of the area consisted of overmature sawlog timber. Harvesting was suspended in a portion of the quota land base in 1979 due to the announcement of the Kananaskis Country Policy. At that time, the regeneration on cutblocks was assessed and reforestation and reclamation undertaken.

The area is used year-round for many types of non-motorized recreation. Facilities have been developed along the Spray, Smith-Dorrien, and Kananaskis Valleys for auto access oriented family campers and day users. In addition, important backcountry areas are developed for hikers and skiers.

Private facilities, predating Kananaskis Country, include the Yamnuska Centre, Ribbon Creek Youth Hostel, Rafter 6 Guest Ranch, and

Fortress Mountain Ski Area. The Alberta government has developed a major visitor centre and travel information centre, ten auto access campgrounds including the Mt. Kidd Recreational Vehicle Park totalling 1 042 sites, the William Watson Lodge, 63 day use areas, the 36 hole Kananaskis Country Golf Course, five visitor amphitheatres, four group campgrounds, and a concession and store. An additional service centre and store has been constructed at Fortress Junction. Roadside and backcountry fisheries and interpretive signs and trails increase public enjoyment and understanding. Backcountry trails and eight backcountry campgrounds have been developed in popular valleys. Other valleys remain untouched. Conflicting uses are generally absent. Large portions of the land base are administered as provincial parks (Bow Valley, Peter Lougheed) or provincial recreation areas.

Downhill ski development is occurring on Mt. Allan (Nakiska Ski Area). A major nordic centre is also under development northwest of Canmore in the Georgetown area. This centre will include cross-country skiing and biathlon trails, a stadium, shooting range and a number of complementary recreational facilities such as horse and hiking trails and possible commercial development. Both of these developments will play important roles in the staging of the 1988 Winter Olympics.

Potential development suggested includes additional fixed roof accommodation, campgrounds at Buller Creek and Goat Pond and a day use area at Goat Pond. Trailheads and trails are proposed at Goat Creek, Goat Falls, Sparrowhawk Valley, west side of the Spray Lakes Reservoir, Georgetown Lookout, Mt. Kidd Lookout, Old Baldy Lookout, Fortress Mountain, and between Buller and Watridge Lake trails. Additional downhill ski development has been suggested for several locations.

Portions of this resource management area have long been dedicated to research and education. The Kananaskis Forest Experimental Station was established in 1934 for forestry research conducted by the Canadian Forestry Service. It was transferred back to the Alberta government in 1979 and some research projects are still continuing under the auspices of the Alberta Forest Service. The University of Calgary Environmental Sciences Centre and the Marmot Creek Watershed Research Basin are also located in the area. The latter was established as a joint venture between the federal and Alberta governments to study the hydrology of a subalpine forest and to determine the effects of timber harvesting on the watershed. In addition, there are current proposals to establish an educational natural area on the Mt. Lorette beaver ponds.

Two of the most significant critical wildlife ranges in the Eastern Slopes are found in this resource management area. The Wind Creek-Pigeon Creek-Ribbon Creek area and the Wedge-Evan Thomas Creek area provide year-round habitat for bighorn sheep, elk and mountain goats. Populations in both areas account for most of the hunting opportunities in this resource management area. The sheep herd in the Wind-Pigeon-Ribbon area is the largest in Alberta and annually yields about one third of the rams produced in Kananaskis Country.

3.2 Management Intent

Most of the Kananaskis/Spray Resource Management Area will be oriented to the preservation of environmentally-sensitive terrain, watershed protection, the preservation of rare, fragile or representative landscapes, the maintenance of aesthetically pleasing landscapes and the protection of critical wildlife ranges. Non-motorized extensive recreation can be compatible with this intent. As well, intensive commercial and public recreation development will take high priority in the Kananaskis and Spray corridors.

Industrial development of natural resources will be limited to the maintenance of hydroelectric power generation capabilities.

The priorities for resource management in this area are:

First-level priorities:

- Maintenance or improvement of water quality, quantity and flow regime.
- Maintenance or enhancement of the natural environment and landscape.

Second-level priority:

- Provision of a wide range of leisure and recreation opportunities.

Third-level priority:

- Maintenance or enhancement of the abundance, diversity, distribution and recreational use of the fish and wildlife resource.

Fourth-level priorities:

- Protection of representative and unique areas of ecological, archaeological and historical interest.
- Maintenance and encouragement of research and educational programs.

Fifth-level priorities:

- Maintenance of trapping opportunities.
- Maintenance of water storage reservoirs for hydroelectric generating capabilities.

Specific management objectives have been developed for the Kananaskis/Spray and are stated in the following section. These objectives are listed alphabetically. In order to achieve the management intent and objectives, portions of the resource management area have been zoned Prime Protection, Critical Wildlife, General Recreation, Industrial and Facility (Eastern Slopes Policy Zones 1, 2, 4, 7 and 8, respectively). This zoning scheme is illustrated in Figure 3. Management guidelines have also been developed to assist in the achievement of the management objectives. These guidelines are applicable either to the entire resource management area or to specific zones within the resource management area. The guidelines indicate whether various land-use activities are permitted, not permitted or compatible and indicate conditions under which permitted activities may occur. These restrictions are based on objectives and guidelines developed specifically for the Kananaskis/Spray Resource Management Area. Definitions of the various "activities" are found in the glossary.

3.3 Specific Management Objectives

The broad management objectives stated in Section 2.2 apply in this resource management area. For brevity, they have not been repeated within this section. Only resource sectors with more detailed or specific objectives are listed.

Ecological Resources

To protect significant ecological resources which include the following: Mt. Lorette beaver ponds, Mt. Buller rock glacier, and Watridge springs.

Fisheries Resources

To maintain and, where possible, enhance naturally reproducing gamefish populations to provide optimum recreation use in the Kananaskis River (250 fish/km) and Smuts Creek (300 fish/km).

To maintain and, where possible, enhance gamefish populations to provide optimum recreational use in the four large reservoirs.

To maintain stocking programs on identified enhancement projects (Mt. Lorette Ponds, Wedge Lake) and beaver dams which provide additional sportfishing recreation.

To increase recreational fishing opportunities by developing new streams, ponds, and lakes (e.g., Buller Lake), beaver dams and borrow pits from road construction or by introducing new species (e.g., golden trout, arctic grayling).

To protect Rawson Lake and the Evan Thomas (golf course) Ponds which are used as brood stock lakes.

To maintain gamefish populations along the Kananaskis River by minimizing the negative effects of river fluctuations.

Heritage Resources

To protect the Colonel's Cabin at the former Kananaskis Forest Experimental Station which has been designated a Provincial Historic Resource.

Interpretation and Environmental Education

To maintain existing levels of personalized and non-personalized interpretive and environmental education services at Bow Valley Provincial Park, Peter Lougheed Provincial Park and the Kananaskis Forest Experimental Station. To develop a range of interpretive and environmental education facilities including interpretive trails, and day use, auto pull-off and on-site exhibits.

Range Resources

To provide a forage base for use by wildlife and for protection of watershed values.

Recreation and Tourism

To provide, promote and manage a wide range of recreational, tourism and leisure opportunities on landscapes where environmentally acceptable. The facilities to be managed by the government will be year-round, non-motorized, and both intensive and extensive.

To provide opportunities to the private sector to develop and/or manage recreation-oriented commercial developments including a golf course, an alpine village, ski resorts, a recreation vehicle campground, a service station and food concessions.

To develop an alpine village at Ribbon Creek, a 550-unit campground at Bow Valley South, group campgrounds at Bow Valley South, Lusk Creek and at the south end of the Smith Dorrien-Spray Trail.

Research

To maintain the land base necessary for the continuance of research projects. Of particular significance is the maintenance of the watershed research opportunities of the Marmot Creek Watershed Research Basin until 1986 when the objectives defined in its terms of reference are complete.

To protect and maintain forest research sites within the Kananaskis Forest Experimental Station area.

Timber Resources

To ensure maintenance of a healthy, vigorous and diversified forest cover for recreation, wildlife and watershed values.

Water Resources

To maintain power generation capabilities on the Kananaskis and Spray Rivers.

Wildlife Resources

To protect populations and critical ranges, in particular:

a) The Wind Creek-Pigeon Creek-Ribbon Creek area will be managed primarily to maintain about 300 bighorn sheep and 200 elk. Habitat suitable for maintenance of grizzlies and other wildlife species will also be maintained;
b) The Wedge-Evan Thomas Creek area will be managed to maintain an elk herd of at least 200, a sheep herd of 50 and a goat herd of at least 50;
c) Mountain goat populations in the Kananaskis drainage will be expanded from about 100 to at least 300 animals while grizzly populations will be maintained at current levels.

3.4 Management Guidelines

3.4.1 General

Guidelines in this section apply either to the entire resource management area or to large sections of it which incorporate several zones.

1. Sanitation logging will be permitted in Zone 1 where adjacent forest values are threatened. Outside of Zone 1, sanitation logging will be allowed where required to maintain a healthy forest cover for recreation, wildlife and watershed values or where adjacent commercial timber values are threatened.

2. Surface disturbances will be reclaimed. Further assessment of the remaining slash on cutblocks will be carried out and appropriate disposal techniques implemented to improve wildlife use and aesthetic values of these sites.

3. To minimize conflict between hunters and other recreationists, hunting may be restricted to bow and arrow in portions of the resource management area determined by Fish and Wildlife Division.

4. To reduce conflicts between recreationists and trappers, trapline dispositions will be reviewed by Alberta Recreation and Parks. Fisheries stocking and enhancement projects will also be reviewed by Alberta Recreation and Parks.

5. Methods of decreasing the impact of the power generating facilities on recreation and on the fisheries will be investigated.

6. If aggregate is required for local use within the resource management area and no alternative source can be located outside the resource management area, sand and gravel extraction may be permitted in Zone 4 subject to stringent conditions designed to protect the integrity of the zone.

7. The issuance of new mineral dispositions will not be permitted in this resource management area, regardless of the zoning. The exploration for and development of minerals will also not be permitted.

These stringent guidelines on mineral activities are required in order to meet the preservation and protection intent and to satisfy the resource management priorities for the area.

8. Cultivation and domestic livestock grazing do not presently occur on public lands and will not be permitted as these activities are considered incompatible with the resource management area intent and objectives.

9. Major auto access camping, day use and interpretation facilities will be concentrated along the transportation corridors in the Smith-Dorrien, Spray and Kananaskis Valleys. Elsewhere, backcountry hiking and cross-country skiing will be favoured. Equestrian use will be limited to connecting links through low-elevation hardy valleys, and will not be allowed at high elevations. In accordance with the regulations for the Kananaskis Country Forest Land Use Zone, activities such as off-highway vehicle use and snowmobiling will not be allowed.

10. Roadside facilities will be designed to withstand heavy use. Where the number of backcountry campers or hikers is causing damage, trails and campgrounds will be constructed to concentrate use.

11. Monitoring of auto access and backcountry recreation use will be undertaken and will remain on-going.

12. Development of an alpine ski area on Mount Allan will be undertaken in such a manner as to minimize any potential impact on the research program in the Marmot Creek Watershed Research Basin before the completion of the research program.

13. To achieve better the intent, objectives and guide- lines for this resource management area, all portions of it currently in the White Area will be reclassified to Green Area and will be incorporated into the Kananaskis Country Forest Land Use Zone. These lands include the former Kananaskis Forest Experimental Station and areas in the Canmore Corridor which have been placed in Improvement District No. 5. These lands will also be included under the Forest and Prairie Protection Act, Forest Protection Area Regulation.

3.4.2 Zone 1 (Prime Protection)

1. Intensive recreation will generally be prohibited. However, several areas have been identified as having potential for

downhill skiing. Should development proceed, ski lifts and associated facilities will be permitted in the Prime Protection Zone while accommodation, stores and other ancillary facilities will be located in adjacent zones where commercial development is permitted. The selection, design and construction of ski areas should include environmental and wildlife considerations.

2. The Kananaskis Trail south of the Kananaskis Lakes Trail will be subject to a seasonal road closure. Currently, this closure is in effect from December 1 to June 15.

3. Primitive campsites and all types of non-motorized trails will be developed as capability and demand warrant. Traversible routes creating long-distance loops will be considered. Small backcountry commercial tourist facilities requiring no road access and a small land base will also be considered. Developments will be sited to avoid "open" wildlife habitats, areas where wildlife is easily disturbed or significant grizzly feeding areas.

4. As identified in the Eastern Slopes Policy, the following activities are considered incompatible with the intent of the Prime Protection Zone and will remain prohibited: serviced camping; and commercial, industrial and residential development.

5. Hunting, fishing and scientific study are considered compatible with the intent of this zone and will be managed under normal guidelines and regulations.

3.4.3 Zone 2 (Critical Wildlife)

1. Recreational trails for non-motorized use will be limited in these areas to those now existing. As Zone 2 in this resource management area is located in alpine areas, no serviced campgrounds will be developed. As well, no new trails nor primitive campgrounds will be developed.

2. Transportation and utility corridors will be limited to those currently existing.

3. Range enhancement for increased forage production by means of selective cutting, prescribed burns or other non-mechanized techniques will be considered in Zone 2.

4. As identified in the Eastern Slopes Policy, the following activities are incompatible with the intent of the Critical Wildlife Zone and will continue to be prohibited: intensive recreation; and commercial, industrial and residential development. Hunting and fishing are considered compatible and will continue to be managed under normal guidelines and regulations.

3.4.4 Zone 4 (General Recreation)

1. Serviced campgrounds and all types of non-motorized trails will be developed as capability and demand warrant. A major recreational complex has been proposed for Bow Valley South, including three major campgrounds (550 sites), three group camps, two day use areas, and horse, hiking, ski, bicycle and interpretive trails. One additional group camp is proposed: near Lusk Creek north of the Sibbald Creek Trail. As Zone 4 parallels major roads, all campgrounds developed will be serviced. Primitive campgrounds will not be developed.

2. Commercial and residential development will generally be prohibited in Zone 4 and directed to the nearby Facility Zones if land is available and the proposed use suited for the area. (See following guidelines 3 and 4 for exceptions.) Smaller commercial development requiring access to land supporting extensive recreational activities, such as backcountry lodges, will be considered in Zone 4.

3. A conceptual facility plan is being developed for the Spray Valley. This plan considers the following: development of ecosection 6M2[10] at the south end of the reservoir for tourism facility development; intensive recreation or commercial recreation; development of cross-country skiing, equestrian and hiking trails; increased water-based recreation opportunities; and development of serviced camping and day use sites. This document should be consulted by private sector development proponents. Once camping facilities are developed, random camping along the reservoir will be eliminated.

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[10] See Kananaskis Country Ecological Land Classification Report.

4. If surrounding areas in the Prime Protection Zone are developed for downhill skiing, the associated commercial facility development may be accommodated in the General Recreation Zone.

5. Additional development of transportation and utility infrastructure will be restricted to existing corridors.

6. To protect the significant ecological resources of the Mt. Lorette beaver ponds, intensive recreation, campgrounds and commercial and residential development will be directed elsewhere.

7. Industrial development, except for that necessary to maintain the hydroelectric generating system, is not compatible in Zone 4 in this resource management area and will not be permitted.

3.4.5 Zone 7 (Industrial)

1. Any further industrial development in the Zone 7 areas must be related to the maintenance of the hydroelectric generating facilities. In addition, further development must be compatible with the recreational priorities in the resource management area.

2. Non-mechanical recreational activities, fishing, and non-motorized trail development should be managed so they do not interfere with the power generating facilities.

3. As Zone 7 in this resource management area is geographically specific to the power generating facilities, there is not sufficient land base for the following activities to occur and they are, therefore, not permitted: hunting, trapping, campgrounds, intensive recreation, and commercial and residential development.

3.4.6 Zone 8 (Facility)

1. Residential development will be limited to the minimum required for essential government and private commercial staff. The cottage subdivision on Lower Kananaskis Lake will continue but no new dispositions will be issued.

2. Planned additional facilities in the Evan Thomas Facility Zone include Ribbon Creek Alpine Village, Wedge Lake and Alpine Village cross-country ski trails, and possible expansions to the Mount Kidd campground.

3. Planned additional facilities in the Peter Lougheed Provincial Park Facility Zone include an expansion to the William Watson Lodge and an expansion of the Elkwood campground to the south.

4. Additional alpine village development will be considered in Facility Zones, for example east of Highway 40 in the Evan Thomas Facility Zone, should market conditions warrant.

5. Major industrial development is considered to be incompatible with the recreational intent for these Facility Zones and will not be allowed.

6. As identified in the Eastern Slopes Policy, the following activities are incompatible with the intent of the Facility Zone and will continue to be prohibited: hunting, trapping and primitive campgrounds.

7. The following activities are considered compatible and will continue to be managed under normal guidelines and regulations: fishing, non-motorized trails, serviced campgrounds, intensive recreation, scientific study, commercial development and transportation and utility corridors.

3.5 Implications

1. Small areas along the northern boundary are also included in the land base of the Canmore Corridor Integrated Land Mangement Plan. For purposes of interpreting government intent for these parcels of Crown lands, the present document should be consulted rather than the Canmore Corridor Plan. Because of this overlapping land base and resulting confusion in policy direction for these lands, an urgent need exists for a review and update of the Canmore Corridor Plan. During that review the areas of overlap should be removed from the land base of the Canmore Corridor Plan.

2. All identified Facility Zones with the exception of the Evan Thomas are occupied by existing or proposed development. If additional commercial or residential nodes are required, Facility Zones will be established through a rezoning process.

3. Co-ordination with Parks Canada is required to ensure that developments in the Spray Valley and adjacent portions of Banff National Park are compatible.

4. RESOURCE MANAGEMENT AREA B: UPPER ELBOW/UPPER SHEEP

4.1 Description

The boundaries of the Upper Elbow/Upper Sheep Resource Management Area are defined as follows (see Figure 4):

- -- The southern, western and northern boundaries generally follow the height of land marking the Kananaskis and Highwood drainages on one side and the Elbow and Sheep drainages on the other. The exception is the Mist Creek watershed of the Highwood drainage which is included in this resource management area.
- -- The eastern boundary generally coincides with the McConnell Fault.

The Upper Elbow/Upper Sheep area is the only large relatively inaccessible part of the planning area which exists in a near natural wildland condition. This resource management area is characterized by mountains and valleys which exhibit alpine and subalpine features. The area is significant for the production of water and is drained by the headwaters of the Elbow, Sheep and Highwood Rivers. The Elbow and Sheep drainages, for example, supply 19 per cent of the flow in the Bow river and much of this can be assumed to originate in the high-yield headwaters.

This resource management area has historically had low levels of use so that land use disturbances have been minimal. Climatic and topographic conditions limit forage production, hence there is no domestic livestock grazing. For the same reasons, timber growth is limited. Historically, small timber operations have occurred in a few of the eastern valleys but the area is not currently considered part of the permanent timber land base.

Mineral activities have generally been absent. Less than five per cent of the area has been leased for coal and no mining is taking place. There is, however, the Burns coal deposit from which a small amount of Kootenay formation coal was once mined. Recoverable reserves are estimated to be two megatonnes.

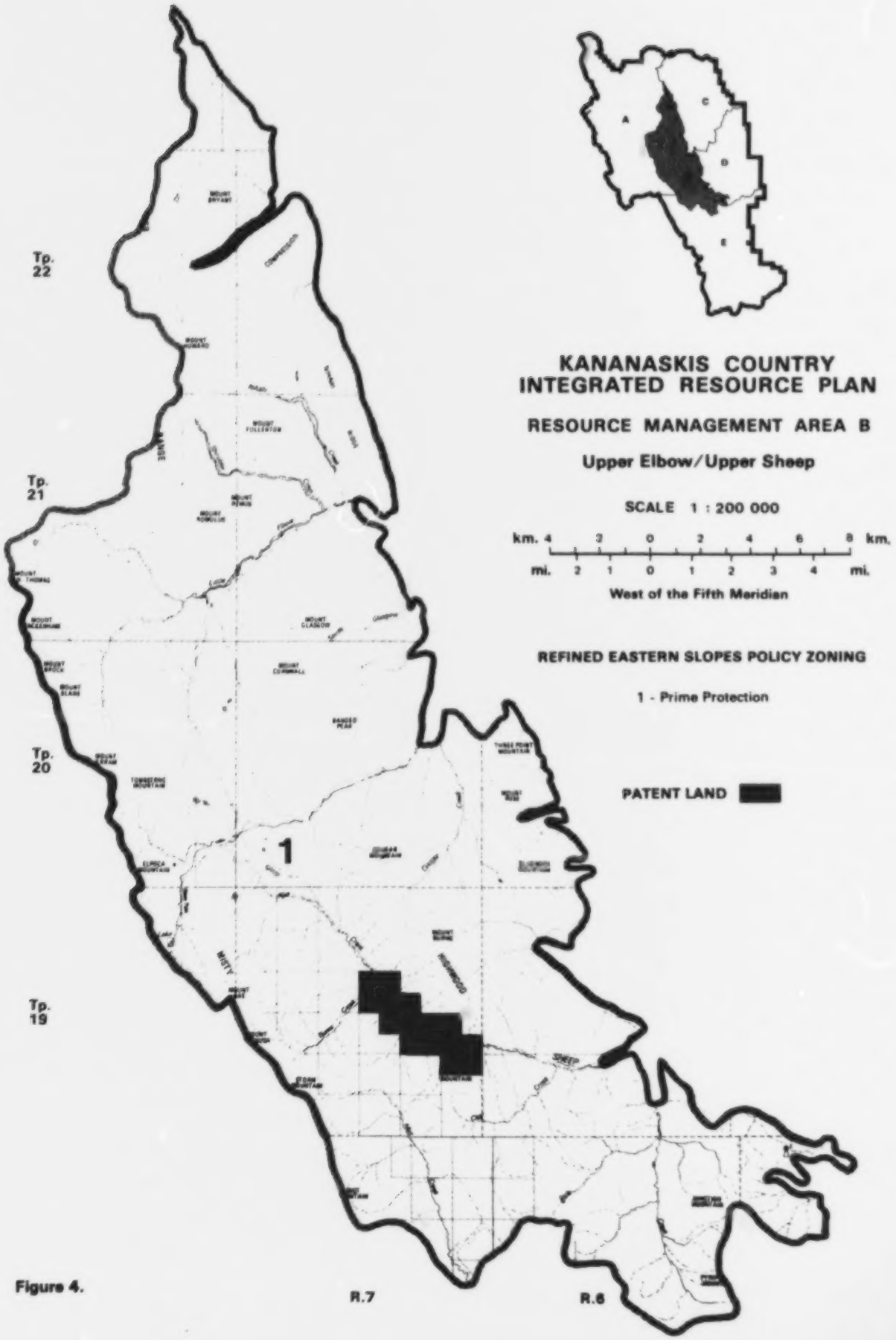
A
B
C
D
E
KANANASKIS COUNTRY
INTEGRATED RESOURCE PLAN
RESOURCE MANAGEMENT AREA B
Upper Elbow/Upper Sheep
SCALE 1 : 200 000
km. 4 3 0 2 4 6 8 km.
mi. 2 1 0 1 2 3 4 mi.
West of the Fifth Meridian
REFINED EASTERN SLOPES POLICY ZONING
1 - Prime Protection
PATENT LAND
Tp. 22
Tp. 21
Tp. 20
Tp. 19
1
R.7
R.6

Figure 4.

About five per cent of the petroleum and natural gas rights have been leased but drilling has been limited to one well and it was abandoned. Quarriable and metallic minerals are not of commercial interest in this resource management area. There are no identified deposits, no prospecting or mining activities, and no exploration or development dispositions.

The area has been extensively used for many backcountry recreational pursuits: hiking, cross-country skiing, hunting, fishing and horseback riding. Facility development is limited and consists of a few trails and three equestrian/hiking primitive campgrounds with 30 sites. The access road paralleling the Sheep and Little Elbow Rivers has been closed to recreational motorized access for several years.

Significant populations of bighorn sheep and mountain goats inhabit this resource management area. Areas in the Upper Sheep extending into the Mist Ridge/Mist Mountain and the Upper Elbow vicinities are considered key summer ranges for bighorn sheep and are extensively used for hunting. Several critical winter ranges including Cougar Mountain and Cliff Creek are also found in this resource management area.

The headwaters of the Elbow and Sheep Rivers contain sparse populations of bull, brook and cutthroat trout (100-300 fish/km) because of the cold, unproductive torrential habitats. Four high-altitude lakes are planted annually with about 1 600 cutthroat trout. In addition, cutthroat trout have been introduced into two streams in the Elbow drainage which were previously barren.

4.2 Management Intent

High priority will be given to the preservation and conservation of the environmentally-sensitive terrain and valuable aesthetic resource of this resource management area. Watershed protection will be of paramount concern, along with the preservation of rare or fragile biological communities, representative areas of natural landscape and critical wildlife ranges. Dispersed recreational activities will be allowed.

The priorities for resource management in this area are:

First-level priorities:

- Maintenance of water quality, quantity and flow regime.
- Maintenance of the natural environment and landscape.

Second-level priority:

- Maintenance of the abundance, diversity, distribution and recreational use of the fish and wildlife resource.

Third-level priority:

- Provision of a limited range of extensive recreational opportunities.

Fourth-level priority:

- Protection of representative and unique areas of ecological, archaeological and historical interest.

Fifth-level priority:

- Maintenance of trapping opportunities.

Specific management objectives have been developed for the Upper Elbow/Upper Sheep and are stated in the following section. These objectives are listed alphabetically. In order to achieve the management intent and objectives, this resource management area has been zoned Prime Protection (Eastern Slopes Policy Zone 1). This zoning is illustrated in Figure 4. Management guidelines have also been developed to assist in the achievement of the management intent and objectives. The guidelines indicate whether various land-use activities are permitted, not permitted, or compatible, and indicate conditions under which permitted activities may occur. These restrictions are based on objectives and guidelines developed specifically for this resource management area. Definitions of the various "activities" are found in the glossary.

4.3 Specific Management Objectives

The broad management objectives stated in Section 2.2 apply in this resource management area. For brevity, they have not been repeated within this section. Only resource sectors with more detailed or specific objectives are listed.

Fisheries Resources

To maintain and, where possible, enhance naturally reproducing gamefish populations to provide optimum recreational use in the Upper Elbow River (275 bull trout/km) and the Upper Sheep River (100 brook and cutthroat trout/km).

To increase recreational fishing opportunities by developing new streams (e.g., Cougar Creek), lakes and beaver dams or by introducing new species (e.g., golden trout, arctic grayling)

Interpretation and Environmental Education

To maintain a low level of personalized and non-personalized interpretive services. Environmental education study sites will be primarily limited to the Little Elbow and the headwaters of the Elbow and Sheep river systems.

Range Resources

To provide a forage base for use by wildlife and for protection of watershed values.

Recreation

To provide year-round wildland-oriented recreation opportunities while maintaining the natural environment and conserving natural landscape values.

To manage a limited range of recreational facilities.

Timber Resources

To ensure maintenance of a healthy, vigorous and diversified forest cover for recreation, wildlife and watershed values.

Wildlife Resources

To protect critical ranges for bighorn sheep on Cliff Creek, Gibralter Mountain, Rickert's Pass, Cougar Mountain and Threepoint Mountain/Mount Rose. To protect critical range for elk on Cougar Mountain and Mist Ridge/Mist Mountain. Special efforts will be made to maintain the sheep range and hunting territory of Junction Creek, Elbow River and Little Elbow River. Hunting and trapping oportunities will be maintained.

4.4 Management Guidelines

4.4.1 Zone 1 (Prime Protection)

1. The number of designated backcountry campgrounds and trails for hiking and equestrian use will be limited to those now existing. Dispersed travel and camping, with no restrictions other than policy regarding minimal impact travel and horse use, provide additional backcountry opportunities. Backcountry use will be monitored on an on-going basis. If environmental damage or a decrease in the quality of the recreational experience is noted, either means of managing the use or the development of additional facilities compatible with the management intent will be considered.

2. A detailed backcountry recreational management plan will be prepared with guidelines for activities to foster minimal impact use in the area. Intensive recreation is considered incompatible with the management intent and will not be considered.

3. All roads in the area will be closed to public travel. All abandoned roads will be reclaimed to primitive trail standards. As transportation and utility corridors are considered incompatible with the management intent, new developments will not be allowed.

4. Sanitation timber harvesting will be allowed only where adjacent forest values for recreation, wildlife, watershed or commercial timber are threatened.

5. Surface disturbances will be reclaimed. Reforestation requirements will be assessed on a site-specific basis by the Alberta Forest Service with Alberta Recreation and Parks, and Fish and Wildlife Division.

6. Range enhancement to benefit wildlife will be considered in this resource management area. Selective cutting, prescribed burns or other non-mechanical techniques will be used. The Burns Mountain and Cougar Mountain areas should be considered first as they have potential for winter range expansion.

7. No new dispositions for petroleum, natural gas, coal, metallic, quarriable or aggregate minerals will be allowed and existing dispositions (petroleum and natural gas, and coal leases) will not be developed.

8. As indicated in the Eastern Slopes Policy, approved snowmobile trails may cross the Prime Protection Zone. To satisfy the demand for long distance trail loops in deep snow areas of Kananaskis Country, a snowmobile loop trail will be developed along the Elbow and Little Elbow Valleys. Access to this loop will be from the Ford Creek Campground area only. Except for this snowmobile trail, off-highway vehicle use will be prohibited.

9. As identified in the Eastern Slopes Policy, the following activities are incompatible with the intent of the Prime Protection Zone and will continue to be prohibited: serviced campgrounds, commercial logging, cultivation, domestic grazing and commercial, industrial and residential development.

10. The following activities are considered compatible with the intent of this zone and will be managed under normal guidelines and regulations: hunting, fishing, trapping and scientific study.

4.5 Implications

1. The Eastern Slopes Policy indicates General Recreation "corridors" along the Elbow, Little Elbow and Sheep Rivers. These Zone 4 corridors are deleted to conform more closely to the management intent of the area.

2. There are 15 quarter sections of patent land in this resource management area, the development of which would be contrary to the management intent. If development occurs, this plan will have to be reassessed in terms of the intent, objectives and guidelines for this resource management area. The presence of this land also limits the ability of the provincial government to provide hiking and equestrian activities.

3. According to ENR Information Letter 80-12 the Fisher and Highwood Ranges were used to separate the area of prohibited

use from that of restricted oil and gas activity. This dividing line approximated the western boundary of the Upper Elbow/Upper Sheep Resource Management Area. The integrated resource plan, however, uses the McConnell Fault which approximates the eastern boundary of the resource management area for the same purpose. This decision should not seriously affect any existing dispositions, but it will mean that the hydrocarbon potential of Resource Management Area B will not be evaluated.

5. RESOURCE MANAGEMENT AREA C: ELBOW/JUMPINGPOUND

5.1 Description

The boundaries of the Elbow/Jumpingpound Resource Management Area (see Figure 5) are defined as follows:

- -- The western boundary generally coincides with the McConnell Fault.
- -- The northern and eastern boundaries follow the Green Area-White Area boundary.
- -- The southern boundary generally follows the height of land marking the Elbow drainage on one side and the Fish and Threepoint drainage on the other.

This resource management area is part of the foothills physiographic region, although portions exhibit characteristics of the alpine and subalpine ecoregions as well as the boreal foothills ecoregion. It is drained by the Elbow River and Jumpingpound Creek which together comprise only seven per cent of the Bow River Basin but supply 18 per cent of the water flow. Small areas in the northwest and south are drained by Lusk Creek (Kananaskis drainage) and Threepoint Creek (Sheep drainage), respectively. This resource management area is not a high water-producing area as compared to the Kananaskis/Spray or Upper Elbow/Upper Sheep. However, watershed sensitivity is higher as soils are more susceptible to erosion. The Elbow River is the major source of water for the City of Calgary.

Resource extraction and recreation have been and continue to be significant activities in this resource management area. Capabilities and demand for most resources and recreational activities are moderate to high.

Domestic grazing is important in the area. In the Green Area, there are four complete grazing allotments: Jumpingpound, Bragg Creek, Elbow and McLean Creek. Portions of the North Sheep and Fish Creek allotments are also located within this resource management area but have been included in the Sheep/Threepoint Resource Management Area for discussion purposes. The set carrying capacity for domestic grazing is approximately 3 700 AUMs.

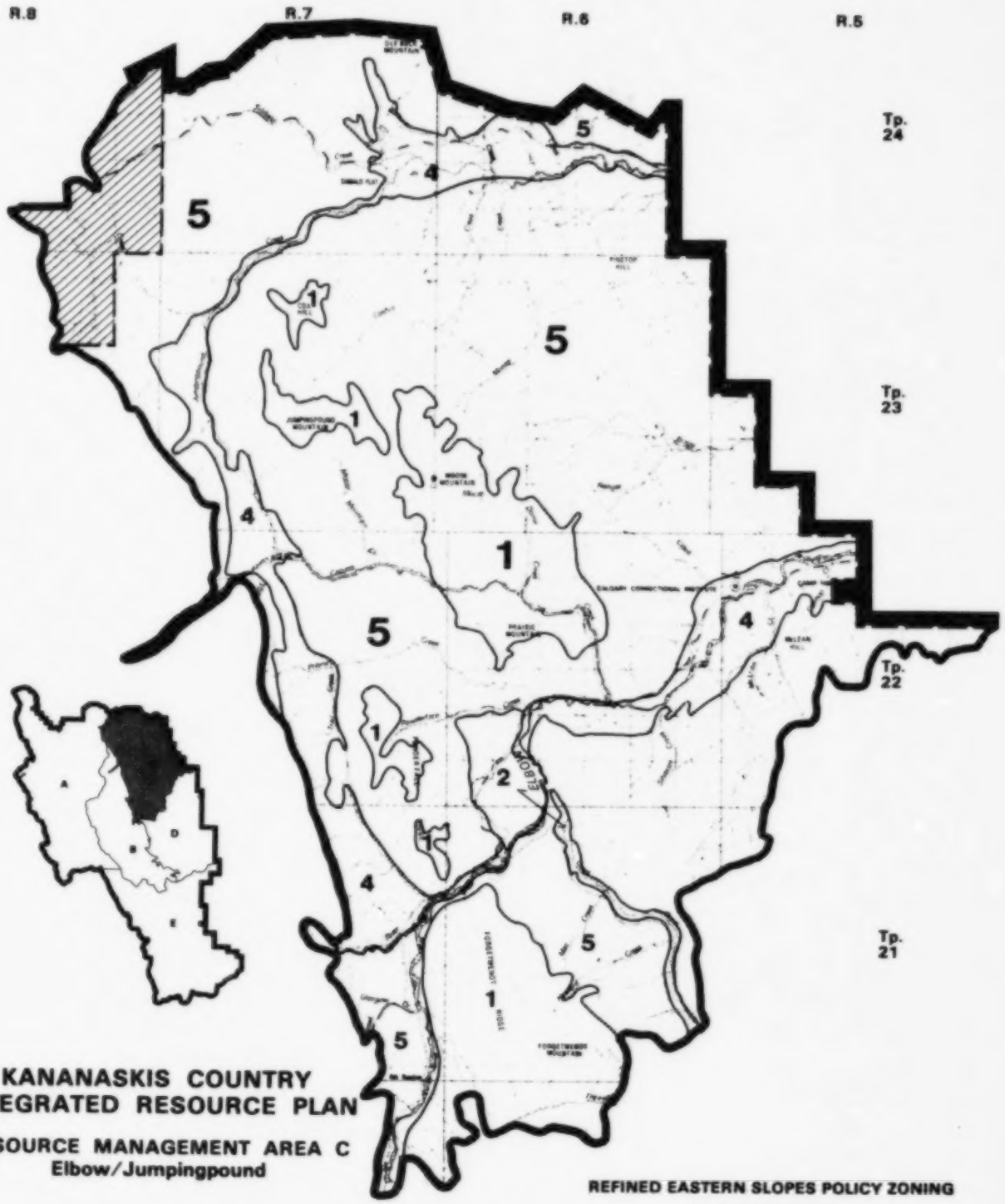
R.8
R.7
R.6
R.5
Tp. 24
Tp. 23
Tp. 22
Tp. 21
5
4
1
2
ELBOW
KANANASKIS COUNTRY
INTEGRATED RESOURCE PLAN
RESOURCE MANAGEMENT AREA C
Elbow/Jumpingpound
SCALE 1 : 200 000
km. 4 2 0 2 4 6 8 km.
mi. 2 1 0 1 2 3 4 mi.
West of the Fifth Meridian
REFINED EASTERN SLOPES POLICY ZONING
1 - Prime Protection
2 - Critical Wildlife
4 - General Recreation
5 - Multiple Use
GREEN AREA ADDITIONS

Figure 5.

At one time this unit was characterized by broad open grasslands similar to Sibbald Flat, but lower fire incidence has reduced grasslands through brush and aspen encroachment. This, in addition to recent recreation and road developments, has significantly reduced forage production. More intensive range management and range improvement projects will be essential to provide a forage production level capable of sustaining the set carrying capacity. An estimated 700 to 950 AUMs will be required to satisfy that requirement.

This resource management area is the closest part of the planning area to the major sawmill at Cochrane. The timber consists predominantly of immature pine which resulted from fire in 1936. As well, there are interspersed pockets of mature spruce and pine that were missed by the 1936 burn. Harvesting has taken place most recently in the Jumpingpound and Rainy Creek areas under commercial timber permits. The area has also been used to meet the high local demand for Christmas trees and firewood. There are currently four Miscellaneous Timber Use Areas within the resource management area.

The Elbow/Jumpingpound Resource Management Area contains 3 444 X $10^6 m^3$ of established marketable gas reserves, all of which are associated with the Moose Mountain sour gas field. This field was recently approved for development through tie-in to existing gas processing facilities outside of Kananaskis Country. About 50 per cent of the Elbow/Jumpingpound is covered by petroleum and natural gas dispositions upon which a total of 26 wells (5 flowing, capped or potential gas wells and 21 abandoned wells) have been drilled.

There are no coal dispositions and no mines. A limited amount of extraction occurred from the small Canyon Creek coal deposit. This deposit now contains less than one megatonne of recoverable reserves. Quarriable and metallic minerals are not of commercial interest. There are no identified deposits, no prospecting or mining activities and no exploration or development dispositions.

A wide variety of intensive and dispersed recreation opportunities has been developed, with an emphasis on day use activities. Private facilities developed in Kananaskis Country include two group camps. The Alberta government has completed the Gooseberry Travel Information Centre and three fishing ponds. Six campgrounds with 685 sites, 27 day use areas and a wide range of trail opportunities provide recreation for family campers, day users, hikers,

equestrians, skiers, snowmobilers, motorcyclists and all-terrain vehicle (ATV) drivers. The Sibbald Snow Vehicle and McLean Creek Off-Highway Vehicle Forest Land Use Zones have been specifically designated for these latter types of activities. Portions of the land base are administered as provincial recreation areas.

The Elbow River, Jumpingpound, Bragg and Quirk Creeks are considered key fisheries streams and support reproducing populations of bull, brook, rainbow and cutthroat trout (450-850 fish/km). Three enhancement projects and one lake are stocked annually with about 11 000 rainbow trout. Notable wildlife resources in this resource management area include critical moose range on Bryant and Bateman Creeks, elk ranges on Powderface Ridge, Canyon Creek and the "Elbow Knob", and bighorn sheep range on Forget-me-not Ridge.

Several significant archaeological and ecological resources exist in this area. These include the Moose Mountain ice caves, periglacial and biotic features on Forget-me-not Ridge, an archaeological site at Sibbald Flat, and the southernmost extension of black spruce in the province near Bragg Creek.

5.2 Management Intent

Resource management activities in the Lower Elbow and Jumpingpound watersheds will be oriented toward the management and development of natural resources, including timber, range and natural gas. General recreation will be a priority use along the Elbow Falls and Powderface Trails. Specific areas having high significance from a watershed or wildlife perspective will also be recognized.

The priorities for resource management in this area are:

First-level priority:

- Maintenance of water quality, quantity and flow regime.

Second-level priorities:

- Provision of recreational opportunities.
- Provision for the management and development of renewable and non-renewable resources.

Third-level priority:

- Maintenance or enhancement of the abundance, diversity, distribution and recreational use of the fish and wildlife resource.

Fourth-level priority:

- Protection of areas of ecological, archaeological or historical significance.

Specific management objectives have been developed for the Elbow/Jumpingpound Resource Management Area and are stated in the following section. These objectives are listed alphabetically. In order to achieve the management intent and objectives, portions of the area have been zoned Prime Protection, Critical Wildlife, General Recreation and Multiple Use (Eastern Slopes Policy Zones 1, 2, 4 and 5, respectively). This zoning scheme is illustrated in Figure 5. Management guidelines have also been developed to assist in the achievement of the objectives. These guidelines are applicable either to the entire resource management area or to specific zones within the resource management area. The guidelines indicate whether various land-use activities are permitted, not permitted or compatible and indicate conditions under which permitted activities may occur. These restrictions are based on objectives and guidelines developed specifically for the Elbow/Jumpingpound Resource Management Area. Definitions of the various "activities" are found in the glossary.

5.3 Specific Management Objectives

The broad management objectives stated in Section 2.2 apply in this resource management area. For brevity, they have not been repeated within this section. Only resource sectors with more detailed or specific objectives are listed.

Ecological Resources

To protect significant ecological resources which include representative areas of the alpine/subalpine interface on Moose Mountain and black spruce forest along Bragg Creek.

Fisheries Resources

To maintain and, where possible, enhance naturally reproducing gamefish populations to provide optimum recreational use in the Elbow River (100-500 bull, brook and cutthroat trout/km), Bragg Creek (500

brook trout/km), Quirk Creek (700 cutthroat trout/km), and Jumpingpound Creek (450 cutthroat trout/km in the headwaters and 800 rainbow and brook trout/km in the lower reaches).

To maintain stocking programs on identified enhancement projects, ponds (Sibbald Lake) and beaver dams which provide additional sportfishing.

To increase recreational fishing opportunities by developing new streams, ponds, beaver dams and borrow pits from road construction or by introducing new species (e.g., golden trout, arctic grayling).

Heritage Resources

To protect the Sibbald Flat archaeological site which has been designated a Provincial Historic Resource.

Interpretation and Environmental Education

To maintain the existing levels of personalized and non-personalized interpretive and environmental education services throughout the campgrounds in the Elbow and the Jumpingpound. To develop a range of interpretive and environmental education facilities including interpretive trails and day use, auto pull-off and on-site exhibits.

Mineral Resources

To provide opportunities for the orderly exploration and development of hydrocarbons within the Elbow/Jumpingpound Resource Management Area including the Prime Protection Zone only in the instance of a step-out well location.

To provide opportunities for industry to define the limits of and recover the reserves within the productive geological structures of the Moose Mountain gas field.

Range Resources

To provide a forage base capable of supporting 3 700 AUMs within the Green Area.

To conduct range improvement programs in the Green Area, through revised range management plans, to maintain or improve forage production in accordance with the established allotment preference quotas.

Recreation and Tourism

To provide a wide range of high-quality recreational, leisure and tourism activities. This range of opportunities will include intensive, year-round, motorized and non-motorized forms of recreation.

To develop two auto access campgrounds (75 sites) and six day use areas/trailheads along the Powderface Trail. To develop a small campground, as demand warrants, and large day use areas for cross-country skiing and picnicking in the West Bragg area.

Wildlife Resources

To protect populations and critical ranges, in particular:

a) The Forget-me-not Ridge area will be managed to maintain about 150 head of bighorn sheep;
b) The "Elbow Knob" and Powderface Ridge areas will be managed to expand the elk herd from about 150 to 250 head;
c) Expansion of elk numbers throughout the resource management area will be considered through range enhancement techniques such as selective logging and prescribed burns;
d) Opportunities will be considered to enhance moose populations along the eastern edge of the area from about two per square mile to four per square mile (8 per 10 km^2 to 16 per 10 km^2) through selective logging and management of shrublands to increase browse production;
e) A unique low-altitude pika colony along the Sibbald Creek Trail will be protected.

5.4 Management Guidelines

5.4.1 General

Guidelines in this section apply either to the entire resource management area or to large portions of it which incorporate several zones.

1. Timber will be allocated through the issuance of normal disposition options available. Priority will be given to supplying local users or commercial operators. A portion of this resource management area will be managed for Christmas tree and firewood production.

2. Off-highway vehicle activity will be restricted to the Sibbald Snow Vehicle (snowmobile only) and the McLean Creek Off-Highway Vehicle (snowmobile and ATV) Forest Land Use Zones. A snowmobile trail will connect the two Forest Land Use Zones. Water quality in the McLean Creek Forest Land Use Zone will be monitored to determine effects of off-highway vehicle activity. Where sedimentation problems occur, mitigative measures will be taken. Range improvement sites within the McLean Creek Off-Highway Vehicle Forest Land Use Zone will be protected by discouraging motorized vehicles on improvement sites between April 1 and November 30 until adequate forage cover has been attained.

3. Non-motorized trails will be developed primarily outside of the two Forest Land Use Zones. Most of the trails and backcountry campgrounds, while accommodating hikers, will be developed for equestrian use. A few hiking-only trails will be constructed up some high mountain ridges. Where major conflicts do appear, additional separation of uses will be considered.

4. Monitoring of auto access and backcountry recreation use will be undertaken and will be on-going.

5. The following roads are subject to seasonal closures. Current dates are as follows:
   i) Powderface Trail -- December 1 to May 15;
   ii) Elbow Falls Trail -- December 1 to May 15, west of Elbow Falls; and
   iii) McLean Creek Trail -- December 1 to April 30, south of McLean Creek Campground.

   Snowmobiling will be allowed on the Powderface and McLean Creek Trails.

6. If aggregate is required for local use within Kananaskis Country, sand and gravel extraction will be permitted in this resource management area, preferably in Zone 5 and possibly in Zones 2 and 4, if no alternate sources can be located. In this case, operations may be permitted subject to stringent conditions designed to protect the intent of the zone.

7. The permanent timber land base will consist of Zones 2, 4 and 5 within the Green Area.

8. Approximately 445 to 585 hectares (1 100 to 1 450 acres) of range improvement will be required to satisfy the range resource objectives. An estimated 605 hectares (1 500 acres) has been identified as having potential for range improvement within the Elbow/Jumpingpound Resource Management Area: 40 hectares (100 acres) within Zone 2, 80 hectares (200 acres) within Zone 4 and 485 hectares (1 200 acres) within Zone 5.

9. Cultivation and industrial development are considered incompatible and are not allowed.

5.4.2 Zone 1 (Prime Protection)

1. If a "step out" from the Moose Mountain gas field occurs, access into Zone 1 for further exploration and development may occur as outlined in Section 2.4, Mineral Resources 3. Petroleum and natural gas exploration and development will not be allowed elsewhere in Zone 1.

2. All natural gas development and activities associated with the Moose Mountain gas field should consider the recreational and watershed values of the area.

3. To allow the Moose Mountain area to revert to uses more appropriate to Zone 1, industry should be encouraged to recover the economic limits of the natural gas reserves in as short a time as feasible.

4. Extensive day use and interpretation facilities along the transportation corridor in the Moose Mountain Zone 1 is compatible with the Prime Protection zoning.

5. Transportation and utility corridors will not be allowed except for the infrastructure necessary for recreation or the development of the gas field in the Moose Mountain Zone 1.

6. Primitive campsites and all types of non-motorized trails will be developed as capability and demand warrant. These activities should avoid Forget-me-not Ridge because of wildlife values.

7. As identified in the Eastern Slopes Policy, the following activities are considered incompatible with the intent of the

Prime Protection Zone and will remain prohibited: serviced camping, logging, domestic grazing, and commercial and residential developments. Non-motorized recreation, scientific study, trapping, fishing and hunting are considered compatible and will be managed under normal guidelines and regulations.

5.4.3 Zone 2 (Critical Wildlife)

1. Any new recreational developments (day use sites, motorized or non-motorized trails) must be in accordance with the intent of the zone. Intensive recreation, campgrounds, commercial or residential development will not be permitted.

2. Operational plans for resource development activities (e.g., timber harvesting, range mangement, or natural gas exploration and development) must be in accordance with the intent of the zone. These plans should mitigate fisheries and wildlife concerns. Timber cutting and range enhancement plans should be of benefit to wildlife. To maintain fisheries, protection of stream banks from degradation by cattle is necessary. Stream crossings, whether for recreation or resource development, will be managed to minimize impact on the watershed.

3. Non-motorized recreation, fishing and hunting are considered compatible and will continue to be managed under normal guidelines and regulations.

5.4.4 Zone 4 (General Recreation)

1. Operational plans for utility corridors, timber harvesting, range management, hunting, trapping, or natural gas exploration and development should not interfere with existing recreation and should mitigate any conflicts with proposed recreation plans.

2. All of the Zone 4, except lands under recreation area reservation, are included in the permanent timber land base. Only sanitation logging will be permitted in recreation areas. Landscape logging will be practised and adequate buffers will be maintained around recreation areas and trails. Location of access and hauling restrictions will be developed in a manner that minimizes recreation conflicts.

3. No future expansion of intensive recreation sites should infringe on primary domestic range on Sibbald Flat proper. Any required expansion of intensive recreation sites on primary domestic range in the Elbow Valley Corridor will be designed to minimize the effects on cattle, and will ensure that grazing priorities are not affected.

4. Natural gas activities will not be permitted on Sibbald Flat proper (Ecosections 6G1 and 6G2)[11].

5. No new access road or trail will be constructed across Sibbald Flat proper. Existing roads across Sibbald Flat (excluding the Powderface Trail) will be reclaimed.

6. No surface disturbance, other than for scientific study approved by Alberta Culture, will occur at the Sibbald Flat archaeologic site. No interpretation facilities will occur at the site unless approved by Alberta Culture.

7. Should commercial development occur, it will be of a smaller scale and density than in Resource Management Area A. Commercial development will be prohibited along the Powderface Trail. Residential development will be limited to the minimum required for essential government and private commercial staff and will be directed to the vicinity of the Elbow Ranger Station.

8. The following activities are considered compatible and will be managed under normal guidelines and regulations: non-motorized recreation, non-motorized trails, serviced campgrounds, intensive recreation and fishing.

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[11]See Kananaskis Country Ecological Land Classification Report.

5.4.5 Zone 5 (Multiple Use)

1. Recreational developments in the block of Zone 5 south of the Little Elbow and west of the Elbow should be limited to extensive non-motorized trails and backcountry campgrounds. This will limit access to the critical bighorn sheep habitat on Forget-me-not Ridge.

2. Range enhancement and timber harvesting projects will consider wildlife and aesthetic recreational values.

3. Commercial development will generally be directed to Zones 4 and 8. Small-scale commercial backcountry lodges servicing the recreational user may be considered in Zone 5.

4. To achieve uniformity of management, the portions of the former Kananaskis Forest Experimental Station contained in this resource management area will be transferred to the Green Area. These lands will also be included under the Forest Prairie Protection Act, Forest Protection Area Regulation.

5. Other activities, such as fishing, hunting, trapping, non-motorized recreation, intensive recreation, campgrounds, scientific study, logging, domestic grazing, petroleum and natural gas exploration and development, and transportation and utility corridors will be managed under normal guidelines and regulations.

5.5 Implications

If the objectives for domestic grazing, timber and other resources are to be met, the amount of future intensive recreation development may have to be limited.

6. RESOURCE MANAGEMENT AREA D: SHEEP/THREEPOINT

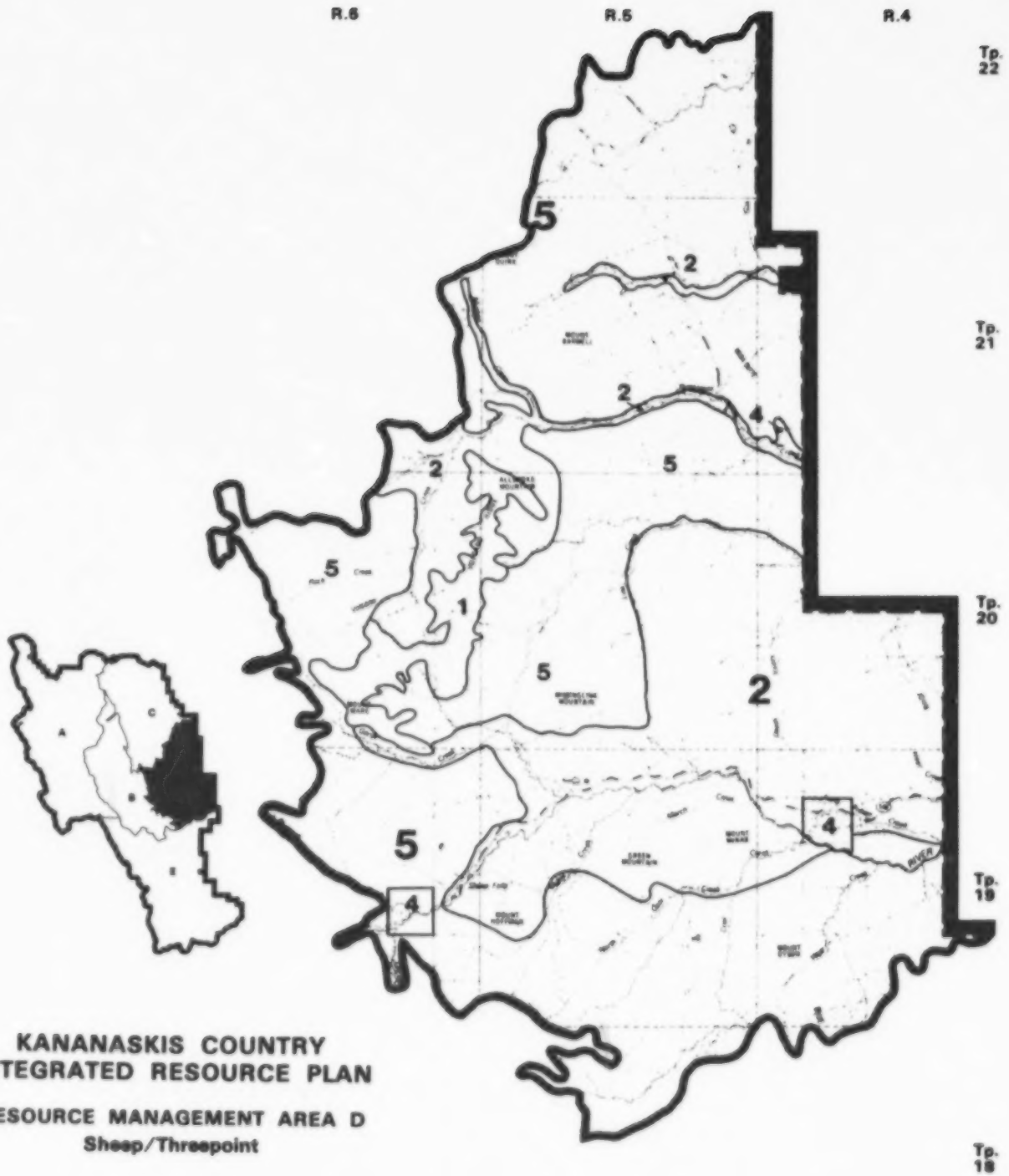
6.1 Description

The boundaries of the Sheep/Threepoint Resource Management Area (Figure 6) are defined as follows:

- -- The western boundary generally coincides with the McConnell Fault.
- -- The northern boundary generally follows the height of land marking the Elbow drainage on one side and the Fish and Threepoint drainages on the other.
- -- The eastern boundary follows the Green Area-White Area boundary.
- -- The southern boundary follows the height of land marking the Sheep drainage on one side and the Highwood drainage on the other.

The Sheep/Threepoint Resource Management Area is part of the foothills physiographic region exhibiting subalpine and boreal foothills biophysical features. Inclusions of aspen parkland are also found. It is drained by three watercourses: Fish Creek, Threepoint Creek (the North Fork of the Sheep River), and the Sheep River. Together these comprise six per cent of the Bow River Basin and supply eight per cent of the waterflow. Like the Elbow/Jumpingpound, this resource management area is not a high water producer but has a high watershed sensitivity as soils are more susceptible to erosion.

Resource extraction and recreation have been, and continue to be, significant activities. Capabilities and demand for most resources and recreational activities are moderate to high. Wildlife and fisheries values are also significant in this resource management area. Fisher, Muskeg, Threepoint and Ware Creeks are known to be key spawning streams on which maintenance of the Bow River rainbow trout fishery greatly depends. Wildlife populations include bighorn sheep, elk, moose and deer. Winter availability of grass and browse is extremely good on the south- and southwest-facing slopes of this resource management area. For this reason, there is a large critical wildlife range extending from John Ware Ridge in the east to Mount Ware in the west. The gorges of the Sheep River, Gorge Creek and Threepoint Creek serve as migration



KANANASKIS COUNTRY
INTEGRATED RESOURCE PLAN

RESOURCE MANAGEMENT AREA D
Sheep/Threepoint

SCALE 1 : 200 000

km. 4 2 0 2 4 6 8 km.
mi. 2 1 0 1 2 3 4 mi.

West of the Fifth Meridian

REFINED EASTERN SLOPES POLICY ZONING

1 - Prime Protection
2 - Critical Wildlife
4 - General Recreation
5 - Multiple Use

Figure 6.

routes and escape terrain for bighorn sheep. Death Valley has the highest population density of moose in Kananaskis Country. The Sheep River Wildlife Sanctuary has been established to protect the bighorn sheep populations. Located in the sanctuary is the R. B. Miller Biological Research Station which is run by the University of Alberta.

There are three domestic grazing allotments in this resource management area: Fish Creek, North Sheep and South Sheep. Portions of these allotments overlap into other resource management areas but are discussed in their entirety within the Sheep/Threepoint. The set carrying capacity for domestic grazing is approximately 9 400 AUMs. Assessments of present forage production indicate that an estimated 1 650 to 1 800 AUMs, acquired through range improvement projects and intensified management practices, will be required to satisfy range requirements within this resource management area.

This area has a predominance of immature fire-origin pine with some areas of mature and overmature spruce and pine. The eastern portion of the unit generally has good growing capability while topography and climate limit growth in the western portion. Incised valleys and steep ridges prohibit normal logging access into the areas around Rock, Volcano, Gorge and Bluerock Creeks. Consequently, this area has been excluded from the permanent timber land base.

The Sheep/Threepoint Resource Management Area is the most important for petroleum and natural gas in the planning area with an accumulated reserve of 6 606 X 10^6 m^3 of marketable natural gas. This reserve is evenly divided between the Whiskey and Quirk Creek sour gas fields. There are 18 wells within the Sheep/Threepoint area. Thirteen are flowing, capped or potential gas wells and five are abandoned. About 25 per cent of the area has been leased.

Coal is of lesser prominence with only 10 per cent coverage by dispositions and no mines. The March Creek and Wolf-Sheep coal deposits together contain 2.4 megatonnes of established recoverable underground coal reserves. Each deposit had a small mining operation on it but both are now closed. Quarriable and metallic minerals are not of commercial interest in this resource management area. There are no identified deposits, no prospecting or mining activities and no exploration or development dispositions.

A variety of recreational activities also occur in the Sheep/Threepoint. Currently, these activities utilize three nodes, Sandy McNabb, Bluerock and North Fork, as staging areas. Emphasis has been on equestrian use. All campgrounds have corrals and facilities for

horse use. Facilities include six auto access campgrounds with 219 sites, three group campgrounds, one primitive campground, 12 day use sites, staging areas and trail networks for equestrian use, hiking, cross-country skiing and all types of off-highway vehicles. This latter type of activity is limited to the McLean Creek Off-Highway Vehicle Forest Land Use Zone.

6.2 Management Intent

The Sheep/Threepoint Resource Management Area will be a multiple use area. A variety of activities will occur including recreation, timber harvesting, grazing, and petroleum and natural gas exploration. As well, watershed protection and the conservation of the fisheries and wildlife resource will be of high significance.

The priorities for resource management in this area are:

First-level priorities:
- Maintenance of water quality, quantity and flow regime.
- Maintenance or enhancement of the natural environment and landscape.

Second-level priorities:
- Provision for the management and development of natural resources, including grazing, timber, fur, and petroleum and natural gas resources.
- Maintenance or enhancement of the abundance, diversity, distribution and recreational use of the fish and wildlife resource.
- Provision of a range of recreational opportunities.

Third-level priorities:
- Protection of representative and unique areas of ecological, archaeological and historical interest.
- Maintenance of research and educational opportunities.

Specific management objectives have been developed for the Sheep/Threepoint Resource Management Area and are stated in the following section. These objectives are listed alphabetically. In order to achieve the management intent and objectives, portions of the area have been zoned Prime Protection, Critical Wildlife, General Recreation and Multiple Use (Eastern Slopes Policy Zones 1, 2, 4 and 5, respectively). This zoning scheme is illustrated in Figure 6. Management guidelines have also been developed to assist in the achievement of the

objectives. These guidelines are applicable either to the entire resource management area or to specific zones within the resource management area. The guidelines indicate whether various land-use activities are permitted, not permitted or compatible and indicate conditions under which permitted activities may occur. These restrictions are based on objectives and guidelines developed specifically for this resource management area. Definitions of the various "activities" are found in the glossary.

6.3 Specific Management Objectives

The broad management objectives stated in Section 2.2 apply in this resource management area. For brevity, they have not been repeated within this section. Only resource sectors with more detailed or specific objectives are listed.

Ecological Resources

To protect significant ecological resources which include a representative area of southern foothills topography and vegetation near Macabee Creek.

Fisheries Resources

To maintain and, where possible, enhance naturally reproducing gamefish populations to provide optimum recreational use in the Sheep River (200 fish/km), Death Valley Creek (400 fish/km), Ware Creek (400 - 1 000 fish/km), Threepoint Creek (9 200 - 1 100 fish/km) and Fisher Creek (100 - 1 000 fish/km).

To protect habitat, spawning and rearing areas for the Bow River trout fishery on Ware, Threepoint and Fisher Creek.

To increase recreational fishing opportunities by developing new streams, ponds, beaver dams and borrow pits from road construction or by introducing new species (e.g., golden trout, arctic grayling).

Interpretation and Environmental Education

Personalized and non-personalized interpretive and environmental education services will be maintained. To develop a range of interpretive and environmental education facilities including interpretive trails and day use, auto pull-off and on-site exhibits.

Mineral Resources

To provide opportunities for the orderly exploration and development of hydrocarbons within the Sheep/Threepoint Resource Management Area exclusive of the Prime Protection Zone.

To provide opportunities for industry to define the limits of and recover the reserves within the productive geological structures of the Whiskey and Quirk Creek gas fields.

Range Resources

To provide a forage base capable of supporting 9 400 AUMs.

To conduct range improvement programs through revised range management plans to maintain or improve forage production in accordance with the established allotment preference quotas.

Recreation and Tourism

To provide a wide range of recreational, leisure and tourism activities. In the Threepoint/Fish area, this range of opportunities will include extensive, year round, motorized and non-motorized forms of recreation. In the Sheep area, the range of opportunities to be provided will be more extensive, year round and non-motorized.

To develop a small campground at Ware Creek and improve trail-heads for equestrian use.

Research

To maintain the land and water base (e.g., Sheep River Wildlife Sanctuary, Gorge Creek) necessary for the continuance of on-going research projects, particularly those associated with the R. B. Miller Biological Research Station.

Wildlife Resources

To maintain or enhance the following populations and critical ranges:

a) Upper Threepoint Creek, Volcano Ridge (bighorn sheep, elk);
b) Windy Point, Death Valley, John Ware Ridge (elk, moose, deer, bighorn sheep);
c) Sheep River Wildlife Sanctuary (bighorn sheep);

d) Mt. McNab, Green Mountain, Mount Hoffman (elk);
e) Shrub and grassland communities in the fluvial systems of Fisher, Threepoint, Muskeg and Ware Creeks (moose, deer).

Specifically, the Sheep River bighorn sheep population will be maintained at a minimum of 100 head, the John Ware Ridge elk herd will be maintained at a minimum of 150 head, and the Mt. McNab elk herd will be allowed to double to 150 head through range enhancement. The eastern half of the resource management area will be managed to maintain an overall moose population of four per square mile.

6.4 Management Guidelines

6.4.1 General

Guidelines in this section apply either to the entire resource management area or to large portions of it which incorporate several zones.

1. Off-highway vehicle activity will be restricted to the McLean Creek Off-Highway Vehicle Forest Land Use Zone. Water quality in the Forest Land Use Zone will be monitored to determine effects of off-highway vehicle activity. Where sedimentation problems occur, mitigative measures will be taken. Range improvement sites within the McLean Creek Off-Highway Vehicle Zone will be protected by discouraging motorized vehicles on improvement sites between April 1 and November 30 until adequate forage growth has been attained.

2. Non-motorized trails will be developed primarily outside of the Forest Land Use Zone. Backcountry campgrounds and trails will be designed for both equestrian and hiker use. Where conflict between users occurs, more separation of hiking and horse trails and backcountry camping will be considered.

3. Monitoring of auto access and backcountry recreation use will be undertaken and will remain on-going.

4. The following roads within this resource management area are subject to seasonal closures. Current dates are as follows:

i) McLean Creek Trail -- December 1 to April 30, from Fisher Creek north (snowmobiling allowed)
ii) Gorge Creek Trail -- December 1 to May 15
iii) Sheep River Road -- December 1 to May 15, west of Sandy McNabb.

5. Timber will be allocated through the issuance of normal disposition options available. Timber dispositions will be available to commercial sawmill operators, local farmers and ranchers and for Christmas tree and firewood cutting.

6. If aggregate is required for local use within Kananaskis Country, sand and gravel extraction will be permitted in this resource management area, preferably in Zone 5, and possibly in Zone 2 if no alternative sources can be located. In Zone 2, operations may be permitted subject to stringent conditions designed to protect the integrity of the zone. Aggregate extraction will not be permitted in Zone 4 and in those areas of Zone 2 described in Section 6.4.3, #8.

7. The permanent timber land base will consist of Zones 2 and 5 except those areas around Rock, Volcano, Gorge and Bluerock Creeks.

8. Approximately 1 010 to 1 110 hectares (2 500 to 2 750 acres) of range improvement will be required to satisfy the range resource objectives. An estimated 2 025 hectares (5 000 acres) have been identified as having potential for range improvement within the Sheep/Threepoint Resource Management Area: 1 175 hectares (2 900 acres) within Zone 2, and 850 hectares (2 100 acres) within Zone 5.

9. Cultivation, large-scale commercial, industrial and residential development are considered inappropriate uses in this resource management area and will not be allowed. Small-scale commercial backcountry lodges servicing the recreational user may be considered in Zone 5.

6.4.2 Zone 1 (Prime Protection)

1. Development plans for recreational facilities (non-motorized trails, primitive campgrounds) will be referred to the Fish and Wildlife Division for review as Volcano Ridge is significant wildlife habitat.

2. As identified in the Eastern Slopes Policy, the following activities are considered incompatible with the intent of the Prime Protection Zone and will remain prohibited: serviced camping, logging, domestic grazing, and petroleum and natural gas exploration and development. In addition, intensive recreation, and transportation and utility corridors are not compatible with the intent and objectives for this Zone 1 covering Volcano Ridge and will not be permitted. Non-motorized recreation, scientific study, fishing, hunting and trapping are considered compatible and will be managed under normal guidelines and regulations.

6.4.3 Zone 2 (Critical Wildlife)

1. Any new recreational developments (day use sites, motorized or non-motorized trails, primitive campgrounds) must be in accordance with the intent of the zone. Serviced campgrounds and other intensive recreational developments would endanger wildlife values and will not be permitted.

2. In order to maintain the fisheries of Fisher, Threepoint, Muskeg and Ware Creeks, protection of stream banks from degradation by cattle is necessary. Stream crossings, whether for recreation or resource development, will be managed to minimize impact on the watershed.

3. Operational or development plans for renewable or non-renewable resources must be in accordance with the intent of the zone. These plans should mitigate fisheries and wildlife concerns. Timber harvesting and range enhancement will be done in a manner consistent with the intent of Zone 2. In particular, maintenance of thermal and escape cover and streamside vegetation will be of greatest concern.

4. Priority use on critical winter range is for wildlife and in such areas maximum forage must be maintained for winter use by wildlife. Cattle will be maintained where not in conflict with this priority such as on sites where forage is not available for winter use because of snow cover. Range and livestock management procedures will be developed to minimize cattle grazing on all critical wildlife ranges including the south- and west-facing slopes of Volcano Ridge, Windy Point, John Ware Ridge, Mt. Hoffman and Green Mountain and benchlands along Threepoint Creek, Gorge Creek and Sheep River.

5. If range conditions deteriorate over time, reduced stocking levels, changes in time of use, livestock removal or range improvements will be undertaken to promote improved range conditions.

6. The R. B. Miller Biological Research Station will not be expanded or upgraded. If this proves to be necessary, it will be relocated, preferably to the Sandy McNabb area. The Sheep River Guardian Station will be retained and facilities replaced as necessary to provide accommodation for one Forest Guardian. The presence of the guardian is required to maintain public services in the area and the protection of the Sheep River Wildlife Sanctuary. All other facilities and accommodation presently existing at the Sheep River Guardian Station are to be removed.

7. Forage condition and utilization in the Death Valley area will be investigated to determine whether domestic grazing is competing with wildlife. If so, a management plan will be prepared to achieve objectives of this Zone 2 area.

8. Exploration and development activities for petroleum and natural gas will not be allowed in the Missinglink Mountain (Ecosections[12] 6C3 and 4G1) and Windy Point (southwest facing slopes of 9MC1) areas nor in the fluvial systems of the Sheep River and Gorge Creek. In the rest of the Zone 2 centred on the Sheep River, seismic lines should be hand cut with helicopter support, or old lines should be reused. Activity will be regulated on a seasonal basis. For example, activity should occur on winter ranges during the summer months, and vice-versa. In the Zone 2 between Volcano Ridge and Forget-me-not Ridge, petroleum and natural gas exploration and development activities will be limited to the summer months on those ecodistricts classified as "morainal" according to the Ecological Land Classification. On "colluvial" ecodistricts, approvals may be granted with site-specific conditions. These activities will not be permitted in "fluvial" ecodistricts.

9. Road development for resource extraction will be open only to industry traffic.

10. Non-motorized recreation, fishing and hunting are considered compatible in Zone 2 and will continue to be managed under normal guidelines and regulations.

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[12]See Kananaskis Country Ecological Land Classification Report.

6.4.4 Zone 4 (General Recreation)

1. The range management plan covering the Zone 4 at Sandy McNabb will be updated to reduce the amount and/or frequency of cattle use in those areas. The range management plan covering the Zone 4 at North Fork will be updated to address specifically the problem of streambank degradation.

2. Petroleum and natural gas development activities will not be allowed in the Sandy McNabb and Bluerock General Recreation Zones. Existing operations will continue in the North Fork General Recreation Zone but no new wells will be permitted.

3. All of Zone 4, except lands under recreation area reservations, are included in the permanent timber land base. Only sanitation logging will be permitted in recreation areas. Landscape logging will be practised and adequate buffers will be maintained around recreation areas and trails. Location of access and hauling restrictions will be developed in a manner that minimizes recreation conflicts.

4. As these Zone 4s are intended to be developed as intensive recreation service nodes, primitive campgrounds will not be permitted. Non-motorized recreation, non-motorized trails fishing, serviced camping and intensive recreation are considered compatible and will be managed under normal guidelines and regulations.

6.4.5 Zone 5 (Multiple Use)

1. The proposed campground at Ware Creek will not open in the spring until the spawning season in Ware Creek is over.

2. Range enhancement and timber harvesting projects will consider wildlife and recreational values.

3. Other activities, such as fishing, hunting, trapping, non-motorized recreation, non-motorized trails, primitive camping, serviced camping, intensive recreation, scientific study, logging, domestic grazing, transportation and utility corridors, and petroleum and natural gas exploration and development will continue to be managed under normal regulations and guidelines.

6.5 Implications

Because of the large land base under Critical Wildlife designation, recreational use and resource development will occur on a restricted basis. For example, approximately 1 175 hectares (2 900 acres) in Zone 2 in the Death Valley, Mud Springs, Windy Point, Dyson Creek, North Coal Creek and Ings Basin areas have been identified as having potential for range improvement. Range improvement in these areas will be critical to fulfilling the government's commitment to maintain grazing capacities.

7. RESOURCE MANAGEMENT AREA E: HIGHWOOD

7.1 Description

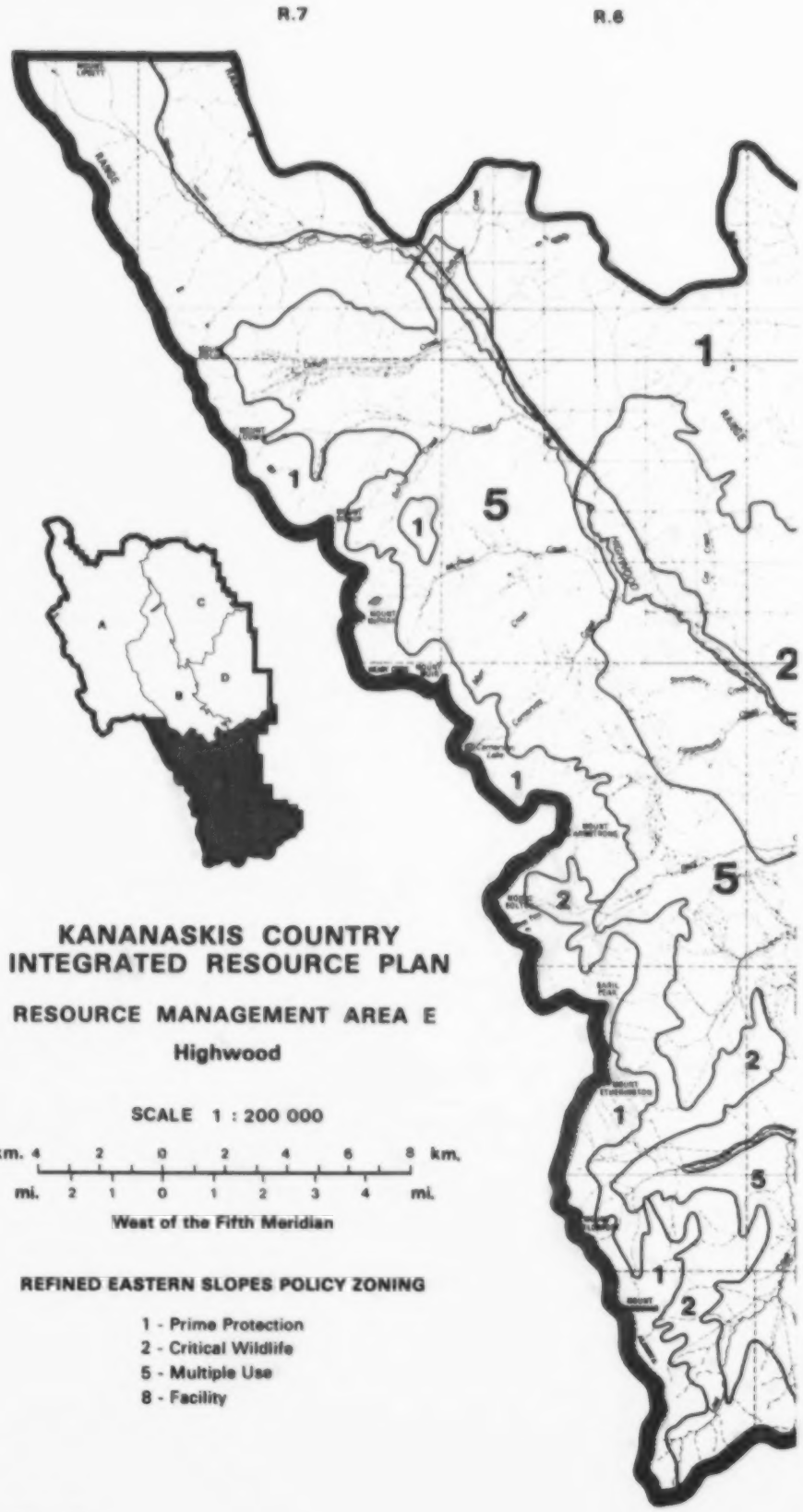
The boundaries of the Highwood Resource Management Area are illustrated in Figure 7 and defined as follows:

- -- The western boundary follows the Alberta-British Columbia border.
- -- The northern boundary generally follows the southern boundary of Peter Lougheed Provincial Park and the height of land marking the Sheep drainage on one side and the Highwood drainage on the other. The Mist Creek watershed is excluded.
- -- The eastern boundary follows the Green Area-White Area boundary.
- -- The southern boundary follows Secondary Roads 532 and 940 until Wilkinson Summit and then follows the height of land dividing the Highwood and Oldman drainages.

The Highwood Resource Management Area is the most ecologically diverse in Kananaskis Country. Vegetation and landforms characteristic of the aspen parkland, boreal foothills, montane, subalpine and alpine ecoregions can be found. The area is drained by the headwaters of the Highwood River except for small portions in the southeast drained by the Livingstone River and Willow Creek. The Highwood drainage is a major water producer, supplying nine per cent of the flow in the Bow River while comprising only five per cent of the basin.

The high significance of this resource management area to wildlife is probably reflective of the ecological diversity. As in the Sheep/Threepoint area, the predominance of open south- and southwest-facing slopes makes large portions critical to the survival of ungulates over winter. The Highwood Valley is one of the most important critical ranges for elk in the province. As well as elk, wildlife populations in this area include mountain goats, bighorn sheep, moose, deer, black bear and grizzly bear.

The area also has important stream and alpine lake fisheries. Rainbow, brook, bull and cutthroat trout are present in this area.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KANANASKIS COUNTRY
INTEGRATED RESOURCE PLAN
RESOURCE MANAGEMENT AREA E
Highwood
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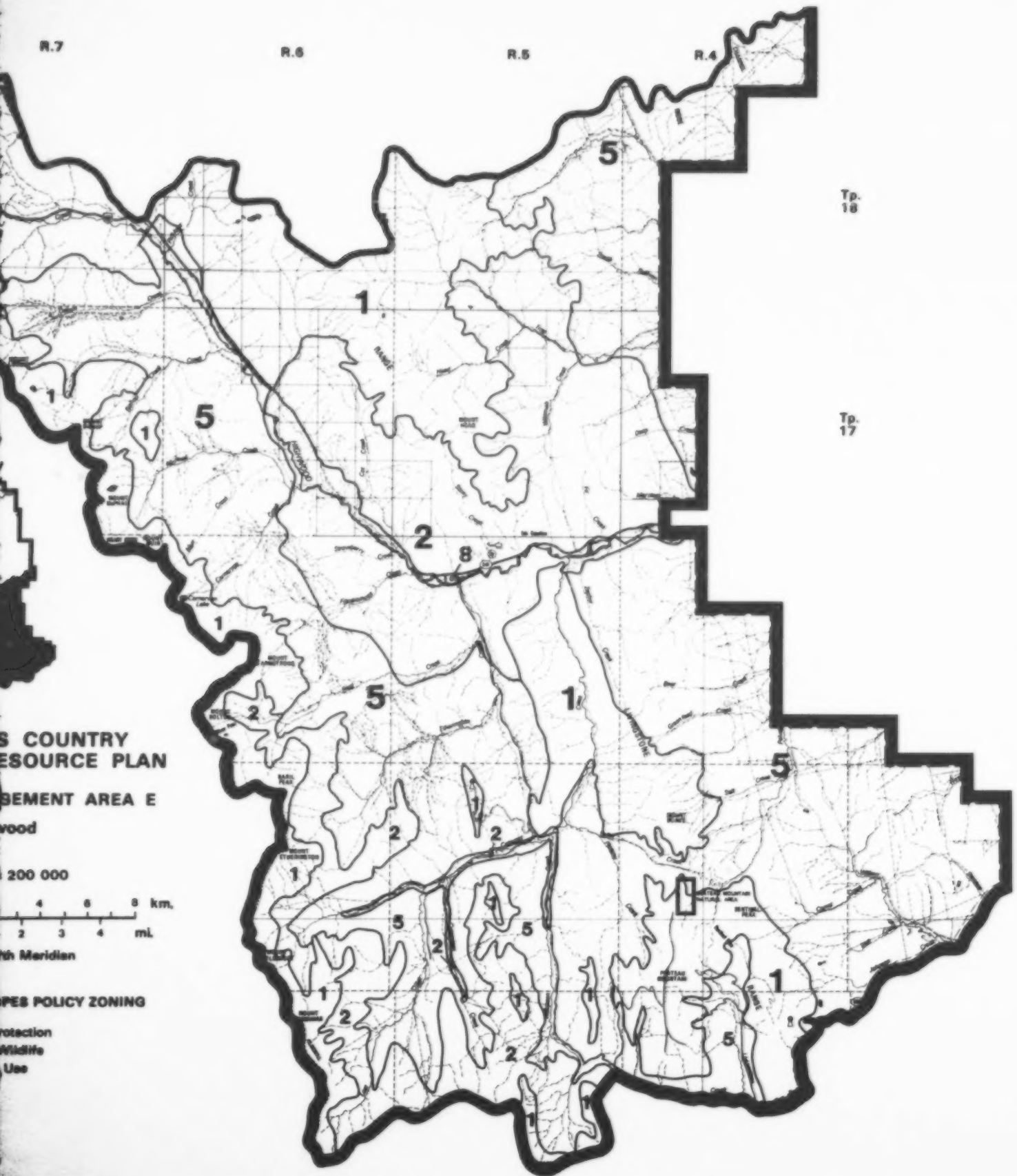
West of the Fifth Meridian
REFINED EASTERN SLOPES POLICY ZONING
1 - Prime Protection
2 - Critical Wildlife
5 - Multiple Use
8 - Facility

Figure 7.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Sullivan, Trap and Pekisko Creeks provide significant fisheries and in their more downstream sections are key spawning streams for Bow River trout. The Picklejar Lakes which contain a native population of cutthroat trout are closed to angling. Four alpine lakes and various beaver dams are stocked to increase the angling potential. An attempt is being made to establish cutthroat trout in seven previously barren streams. Cataract Creek has, for many years, been considered a unique watershed with high environmental and fisheries values.

There are six complete grazing allotments within the Green Area: Sullivan-Flat, Blue Ridge, Deep Creek, Cataract Creek, Pekisko, and Section Six. The Highwood allotment overlaps slightly into the Upper Elbow/Upper Sheep Resource Management Area but is considered a complete allotment within the Highwood Resource Management Area. The Sheppard-Stimson and Willow Creek allotments are located partially in the Highwood Resource Management Area and are included for discussion purposes. A small portion of the Savanna Creek allotment is also within this resource management area but it will be addressed in the Livingstone-Porcupine Hills Integrated Resource Plan. The set carrying capacity for domestic grazing is 10 400 AUMs. Assessments of forage productivity indicate that an estimated 650 to 1 200 AUMs will be required to satisfy range requirements within the Green Area.

The western part of this resource management area consists of a mature and overmature spruce-pine complex. This area is under quota until at least 1986. The eastern part of the area has a predominance of immature fire-origin pine. The timber in the Cataract Creek watershed is a priority for harvesting because of its age and mistletoe infestation.

The Highwood Resource Management Area is as yet little developed for recreation and is less heavily used than most of Kananaskis Country. The only major commercial facility is the Highwood House gas station. A travel information centre is also planned for this locale. Campgrounds have been constructed at Etherington and Cataract Creek, with a campground existing at Indian Graves (total of 141 sites). Two group camps and 15 day use areas have been developed. A portion of the Great Divide Trail passes through the Cataract Creek area. Snomobiling is limited to the Cataract Creek Snow Vehicle Forest Land Use Zone. Development of intensive recreational facilities, such as campgrounds, in the Highwood Valley has been prohibited to protect the wildlife values.

The Plateau Mountain area has been placed under a reservation to protect its ecological resources. The top of Plateau Mountain is an extensive plateau at about 2 450 m, uncommon in Alberta, exhibiting periglacial features such as ice caves and patterned ground which are the finest and most extensive in Alberta. This unusual environment provides habitat for species such as white-tailed ptarmigan, water voles, pikas and bighorn sheep. Rare stands of white bark pine are also found in this area.

Petroleum and natural gas rights have been leased for one third of the Highwood Resource Management Area, with the majority of the dispositions being concentrated in its eastern and southern portions. Here 19 wells have been drilled, 10 flowing, capped or potential gas wells, and nine abandoned wells. The one gas field in the area is Savanna Creek which is producing sour gas through a pipeline network that leads east out of the field and across the planning area's perimeter. There are estimated to be 1 089 X 10^6 m^3 of marketable natural gas reserves remaining.

About 20 per cent of the Highwood is covered by coal leases which correspond closely to the Kananaskis and Savanna Creek coal fields and the Flat Creek East, Flat Creek West, Picklejar, Highwood Ford and Hailstone Butte coal deposits. Reserves within the Highwood Resource Management Area total 80 megatonnes of remaining recoverable underground Kootenay formation coal reserves. This is the largest accumulation within the Kananaskis Country Planning Area. Three mines were once operative extracting coal from the exposed seams of the Flat Creek West, Hailstone Butte and Highwood Ford deposits. All are now abandoned.

Interest has been expressed for metallic minerals by virtue of an application for a quartz mineral exploration permit. This application covered nearly 20 percent of the area. In April 1985, a metallic mineral exploration permit was issued over a much reduced area of the original application. Activities on this permit have yet to begin.

7.2 Management Intent

As identified in both the Eastern Slopes and Kananaskis Country Policies, the Highwood area will be oriented toward the preservation and conservation of the valuable aesthetic and wildlife resources. Watershed protection will be of paramount concern, along with the preservation of environmentally sensitive terrain, representative areas

of natural landscape and critical wildlife ranges. Resource and recreational development will be allowed where they do not conflict with the major intent.

The priorities for resource management in this area are:

First-level priorities:
- ➤ Maintenance of water quality, quantity and flow regime.
- ➤ Maintenance or enhancement of landscape and aesthetic values.

Second-level priority:
- ➤ Maintenance or enhancement of the abundance, diversity, distribution and recreational use of the fish and wildlife resource.

Third-level priorities:
- ➤ Provision for the management and development of natural resources, including petroleum and natural gas, domestic grazing, timber and fur.
- ➤ Provision of a limited range of recreational opportunities.

Fourth level priority:
- ➤ Protection of representative or unique areas of ecological, archaeological and historical interest.

Specific management objectives have been developed for the Highwood Resource Management Area and are stated in the following section. These objectives are listed alphabetically. In order to achieve the management intent and objectives, portions of the area have been zoned Prime Protection, Critical Wildlife, Multiple Use and Facility (Eastern Slopes Policy Zones 1, 2, 5 and 8, respectively). This zoning scheme is illustrated in Figure 7. Management guidelines have also been developed to assist in the achievement of the objectives. These guidelines are applicable either to the entire resource management area or to specific zones within the resource management area. The guidelines indicate whether various land-use activities are permitted, not permitted or compatible and indicate under what conditions permitted activities may occur. These restrictions are based on objectives and guidelines developed specifically for the Highwood Resource Management Area. Definitions of the various "activities" are found in the glossary.

7.3 Specific Management Objectives

The broad management objectives stated in Section 2.2 apply in this resource management area. For brevity, they have not been repeat-

ed within this section. Only resource sectors with more detailed or specific objectives are listed.

Ecological Resources

To protect the internationally significant ecological resources of Plateau Mountain.

Fisheries Resources

To maintain and, where possible, enhance naturally reproducing gamefish populations to provide optimum recreational use in the Highwood River (300-700 fish/km), Sullivan Creek (300-750 fish/km), Trap Creek (300-500 fish/km), Cataract Creek (1 200 fish/km), and Etherington, Baril, McPhail and Fitzsimmons Creeks (100-600 fish/ km).

To increase recreational fishing opportunities by developing new streams, lakes, beaver dams and borrow pits from road construction or by introducing new species (e.g., golden trout, arctic grayling).

To manage Cataract Creek for its natural character with fisheries identified as being of paramount concern.

Heritage Resources

To protect the significant historical resource of the Zephyr Creek pictograph site which has been designated a Provincial Historic Resource.

Interpretation and Environmental Education

To maintain personalized and non-personalized interpretive and environmental education services. To develop a range of interpretive and environmental education facilities including interpretive trails, and day use, auto pull-off and on-site exhibits.

Mineral Resources

To provide opportunities for the orderly exploration and development of hydrocarbons both east of the McConnell Fault and within the Cataract Creek Forest Land Use Zone, inclusive of the Prime Protection Zone only in the instance of a step-out well location.

To provide opportunities for industry to define the limits of and recover the reserves within the productive geological structures of the Savanna Creek gas field.

Range Resources

To provide in the Green Area a forage base capable of supporting 10 400 AUMs.

To conduct range improvement programs in the Green Area, through revised range management plans, to maintain or improve forage production in accordance with the established allotment preference quotas.

Recreation and Tourism

Recreation in the Highwood area will be geared toward the maintenance and conservation of natural landscape and wildlife values. To protect the wildlife values in the main Highwood Valley, the range of recreational opportunities to be provided will be extensive, non-motorized and summer use only. Only limited backcountry and highway-oriented day-use facility development will be provided. In the Sullivan, Trap, Pekisko and Cataract areas, the range of opportunities to be provided will be extensive, year round, motorized and non-motorized.

Specific future developments include expansion of the Indian Graves campground.

Opportunities will be provided to the private sector to develop and/or manage a commercial service facility in the Highwood Junction area on a seasonal basis.

Wildlife Resources

Wildlife values will have high priority in the Highwood area. Critical wildlife areas, as follows, will be protected and managed primarily for their wildlife values:

a) Highwood Junction, Strawberry Hills and the Highwood Valley north to Lineham Meadows (winter ungulate range);
b) Marston-Fir-Deep Creeks (deer, elk, bighorn sheep);
c) Trap Creek (elk, deer);
d) Plateau Mountain-Hailstone Butte-Zephyr Creek (bighorn sheep); and
e) Highwood-Oldman Divide (summer elk range).

Specifically, the Highwood Valley elk herd will be maintained at a minimum of 300 head, the Marston Creek and Trap Creek elk herds will be maintained at 100 head each and the Plateau Mountain bighorn sheep herd will be maintained at 150 head. The Highwood-Oldman Divide will be managed to maintain a minimum summer elk population of 150. The opportunity for expansion through range enhancement techniques such as selective logging will be evaluated.

7.4 Management Guidelines

7.4.1 General

Guidelines in this section apply either to the entire resource management area or to large portions of it which incorporate several zones.

1. The following roads within this resource management area are subject to seasonal closures. Current dates are as follows:
   i) Kananaskis Trail -- December 1 to June 15, north of Highwood Junction
   ii) Kananaskis Trail -- December 1 to April 30, Cataract Creek to Wilkinson Summit (snowmobiling allowed).

2. Off-highway vehicle activity is restricted to the Cataract Creek Snow Vehicle Forest Land Use Zone (snowmobiling only).

3. Only limited development of facilities (trails, primitive campgrounds) will occur off the major transportation corridors to accommodate extensive backcountry recreation. Traditional backcountry random use will continue. Designated trails, other than in the Cataract Creek Forest Land Use Zone, do not exist. Consideration may be given in the future to the establishment of a few designated low-standard equestrian/ hiking trails if warranted by demand.

4. Intensive recreational uses will not be permitted in this resource management area.

5. A conceptual facility plan is being developed for the Cataract Creek Forest Land Use Zone. This plan considers the following: trail, campground and day-use development. This document should be consulted by private sector development proponents.

6. Because of wildlife concerns, serviced campgrounds will not be constructed in the main Highwood Valley.

7. Monitoring of auto access and backcountry recreation use will be undertaken and will remain on-going.

8. Special fishing regulations apply to Cataract Creek and its tributaries.

9. Approximately 405 to 730 hectares (1 000 to 1 800 acres) of range improvement will be required to satisfy the range resource objectives. An estimated 2 310 hectares (5 700 acres) has been identified as having potential for range improvement within the Highwood Resource Management Area: 890 hectares (2 200 acres) within Zone 2 and 1 420 hectares (3 500 acres) within Zone 5.

10. Timber will be allocated through the issuance of normal disposition options available. Timber dispositions will be available to commercial sawmill operators, to local farmers and ranchers, and for firewood cutting. Quota commitments will be honoured in the Cataract and Etherington drainages. Harvesting will not be allowed where major conflicts with recreation occur.

11. Exploration for and development of petroleum and natural gas, will be considered in the area east of the McConnell Fault and south of Baril Creek in the Cataract Creek Forest Land Use Zone.

12. If aggregate is required for local use within Kananaskis Country, sand and gravel extraction will be permitted in this resource management area, preferably in Zone 5, and possibly in Zone 2 if no alternative sources can be located. In Zone 2, operations may be permitted subject to stringent conditions designed to protect the integrity of the zone.

13. All of Zones 2 and 5 within the Green Area will be included in the permanent timber land base.

14. Cultivation and industrial, commercial and residential development are considered incompatible in this resource management area and will not be permitted.

7.4.2 Zone 1 (Prime Protection)

1. If a "step-out" from the Savanna Creek gas field occurs, access into Zone 1 for further exploration and development may occur as outlined in Section 2.4, Mineral Resources 3.

2. As identified in the Eastern Slopes Policy, the following activities are not considered compatible in the Prime Protection Zone and will not be allowed: serviced camping, logging and domestic grazing. The following activities are considered compatible and will be managed under normal guidelines and regulations: non-motorized recreation, hunting, fishing, trapping and scientific study.

7.4.3 Zone 2 (Critical Wildlife)

1. All operational or development plans, whether for renewable or non-renewable resources, must be in accordance with the intent of the zone. These plans should mitigate wildlife and fisheries concerns. Timber harvesting and range enhancement will be done in a manner consistent with the intent of Zone 2.

2. In order to maintain the fisheries of Sullivan, Pekisko and Cataract Creeks, protection of stream banks from degradation by cattle, recreationists or resource extraction activities is necessary. As well, stream crossings, whether for recreation or resource development, will be managed to minimize impact on the watershed.

3. Campground development will be limited to the existing Highwood Group Camp. No expansion will be allowed and it will be closed annually from December 1 to June 15.

4. Habitat enhancement for wildlife will be considered where necessary to maintain or enhance wildlife populations. Fisheries enhancement projects, including stocking of beaver ponds in the Highwood River, will also be considered.

5. Priority use on critical winter range will be for wildlife, and in such areas maximum forage must be maintained for winter use by wildlife. Cattle grazing will be maintained where not in conflict with this priority such as on sites where forage is not available for winter use because of snow cover. Range and livestock management procedures will be developed to minimize cattle grazing on all critical wildlife ranges including the Zone 2 along the Highwood-Oldman Divide or other summer ranges along timberline.

6. If range conditions deteriorate over time, reduced stocking levels, changes in time of use, livestock removal or range improvements will be undertaken to promote improved range conditions.

7. Development sites and access roads for renewable and non-renewable resource extraction are to be located away from open meadows and southwest-facing grassy slopes significant to wildlife. Where there are no other routes available, enhancement projects will be conducted to offset wildlife losses. Access roads will be closed to the public (gated). If at all possible, seismic work should employ portable or hand-cut techniques.

8. As the Zone 2s contain a variety of winter and summer range, seasonal restrictions will apply if needed on renewable and non-renewable extraction activities.

9. In the Zone 2 covering the Highwood-Oldman Divide, recreational trail development, whether for snowmobiles, hiking or equestrian use, will be minimized. Trails will be limited to providing connectors between the Highwood and Oldman areas.

10. Harvesting overmature and diseased timber in the Highwood-Oldman Divide (Lost Creek, Cummings Creek) will be a priority. Harvesting will maintain or enhance wildlife and watershed values.

11. The Highwood Guardian Station will be retained to provide accommodation for one Forest Guardian and a base for forest protection requirements. Upgrading and expansion will be limited to replacing the existing facilities and providing the accommodation necessary for the forest protection program in the area.

12. Non-motorized recreation, fishing and hunting are considered compatible in the Critical Wildlife Zone and will be managed under normal guidelines and regulations.

7.4.4 Zone 5 (Multiple Use)

1. Enhancement projects for fisheries or wildlife will be considered in some locations to benefit specific species.

2. Timber harvesting and range enhancement projects should consider wildlife and recreational values.

3. To protect the unique ecological resources of Plateau Mountain, off-highway vehicle activity in this portion of the Cataract Creek Forest Land Use Zone will be limited to an east-west snowmobile connector trail over Salter Pass.

   Construction of a summer use only staging area in the sub-alpine ecoregion along the industrial access road to the top of Plateau Mountain is recommended. Motorized recreational access will be prohibited beyond this staging area.

4. Non-motorized recreation, fishing, hunting, trapping, scientific study, logging, domestic grazing and transportation and utility corridors will be managed under normal regulations and guidelines. Petroleum and natural gas exploration and development east of the McConnell Fault and in the Cataract Creek Forest Land Use Zone will also be managed under normal guidelines and regulations.

7.4.5 Zone 8 (Facility)

1. A small-scale commercial facility to serve the public will be allowed at Highwood Junction. This facility will be closed annually from December 1 to June 15 and the development of commercial accommodation will not be allowed.

2. As the zone is extremely small, the following activities will not be permitted: hunting, trapping, campgrounds, grazing and industrial development. Residential development to accommodate essential staff only will be considered.

7.5 Implications

1. Resource development will occur on a restricted basis because of the large land base designated Critical Wildlife. For example, at present range improvements will not be heavily concentrated in Zone 2 areas but may be considered at a later date through revised range management plans if required to maintain the government's commitment to established grazing capacities. Approximately 890 hectares (2 200 acres) have been identified within Zone 2 as having potential for range improvement. Areas

identified include Deep Creek, Bull Creek, Highwood River tributaries, Fitzsimmons Creek, Strawberry Creek, Stony Creek, Wileman Creek, Fir Creek, Marsden Creek, Zephyr Creek and E 1/2 8-17-4-W5M.

2. Future intensive recreation developments will be limited in this area as it is not compatible with the management intent. In support of this, General Recreation Zones in the upper Highwood Valley and along the Johnson Creek Road have been deleted in favour of more suitable Prime Protection, Critical Wildlife or Multiple Use designations.

3. Guideline 7.4.3, Zone 2 (Critical Wildlife) #7 will affect the opportunities for petroleum and natural gas development. This guideline is thought to be necessary in order to provide security for the wildlife. Visibility may result in wildlife being harassed and/or driven off the meadows. The open meadows or grasslands constitute large portions of ecosections 4F1, 4G1, 4G2, 4M1, 5GF1, 6MF1, 6C3 and 9MC1. Currently, 13 petroleum and natural gas dispositions intersect these areas. In many cases there may not be enough room in the small groves of trees to hide permanent wellsite structures and clearings from view. If a suitable well site can not be found on a lease, there is the potential for sterilization or inadequate evaluation of the hydrocarbon resources.

8. IMPLEMENTATION

This section contains a general implementation statement key for the delivery of the Kananaskis Country Integrated Resource Plan. The general implementation statement outlines broad administrative procedures and mechanisms for plan implementation, review and monitoring.

The Kananaskis Country Integrated Resource Plan will be made operative within the terms of existing legislation, regular programs and activities of the government, specific operational resource management plans, specific development projects, referral processes and administrative bodies. The revised zoning provides a means of processing applications for new public land dispositions within the planning area. Existing systems for referral and interdepartmental review will apply to the plan. Resources will continue to be administered by the departments responsible, in line with the approved zoning, resource management guidelines and any operational management plans.

Government management agencies participating in the Kananaskis Country Integrated Resource Plan will have several responsibilities to ensure the effective delivery of this plan. It will be their responsibility to deal with any conflicts or concerns with respect to implementation or interpretation of any of the plan's provisions. These responsibilities are outlined by subject area below.

Referral Systems: Participating government management agencies will ensure that formal referral systems of the Alberta government (e.g., Internal Referral Systems of Alberta Energy and Natural Resources) are adequate to encompass all affected or concerned agencies. When this comprehensiveness cannot be facilitated through existing referral systems, modified or new referral systems will be established. For example, ENR Information Letter 80- 12 needs to be replaced and referral mechanisms need to be developed for proposed activities within provincial parks and recreation areas. Specific to this planning area, referrals will have to be co-ordinated with the administrative system of Improvement District 5.

Plan Monitoring: The Kananaskis Country Integrated Resource Plan will be reviewed annually by the Kananaskis Country Interdepartmental Committee to facilitate:

-- an assessment of the relevancy of the stated resource objectives in light of changing conditions;
-- an assessment of the success of resource management guidelines and referral procedures;
-- an assessment of agency operational plans to ensure their consistency with the Kananaskis Country resource management area intents, objectives and guidelines;
-- a statement recommending amendments to the Kananaskis Country Integrated Resource Plan and future actions required to maintain or promote government resource management activities in the planning area.

An annual report will document any changes in the plan which resulted from this annual review. The report will also highlight the previous year's activity in the planning area, including the number, type and location of referrals and what conflicts or concerns were addressed and resolved. The report will also indicate what might be expected to be accomplished in the planning area during the next year. This report may be deferred if it is not needed because of a lack of activity or progress on government resource management objectives within the planning area.

A major plan review co-ordinated by the Kananaskis Country Interdepartmental Committee will occur at five year intervals to facilitate:

-- a comprehensive assessment of all aspects of the plan, including but not limited to broad resource management objectives, land use zoning and resource management area boundaries and intents;
-- a public review on the same basis as the public is involved in the development of new integrated resource plans;
-- a statement recommending amendments to the plan and future actions required to maintain or promote government resource management activities in the planning area.

A five-year report will document all amendments. Major plan reviews may be undertaken more frequently than every five years if major resource policy commitments or developments of program initiatives require it.

Amendment Procedures: Changes to the planning area boundary, broad resource management objectives, land use zoning and the resource management area boundaries and intents will require amendment to the

Kananaskis Country Integrated Resource Plan. An amendment to the plan may be considered as a result of an annual review, major five-year review, government request or as a result of a request from an individual, group or organization outside the government. Proposed amendments to the Kananaskis Country Integrated Resource Plan from outside the government should be made by formal application to the Assistant Deputy Minister of the Resource Evaluation and Planning Division, Alberta Forestry. Opportunities for public review of proposed major amendments to the Kananaskis Country Integrated Resource Plan will be provided before changes are approved by the Alberta government. Amendments which entail a major policy decision or a change to the basic intent of the plan may be forwarded by the Minister to the Cabinet Committee for approval.

APPENDIX

Intent Statements for Eastern Slopes Policy Zones

The specific intents of the various Eastern Slopes Policy Zones, as interpreted by the Kananaskis Country planning team, are:

Zone 1 (Prime Protection)	To preserve environmentally sensitive terrain and valuable ecological, wildlife and aesthetic resources. To protect those portions of watersheds receiving maximum amounts of precipitation and producing most of the streamflow.
Zone 2 (Critical Wildlife)	To protect range, or terrestrial and aquatic habitats that are crucial to the maintenance of specific ungulate, furbearer, bird and fish populations.
Zone 3 (Special Use)	To contain lands which have unique management requirements or legislative status which cannot be accommodated within any of the other zones. (Note: No examples of this zone are located in the Kananaskis Country Planning Area.)
Zone 4 (General Recreation)	To retain a variety of natural landscapes within which a wide range of outdoor recreation opportunities may be focused.
Zone 5 (Multiple Use)	To provide for the integrated management and development of the full range of available resources, without adversely affecting watershed or environmental conditions in the long term.
Zone 6 (Agriculture)	To recognize those lands which are presently utilized or are considered suitable for cultivation and improved grazing. (Note: No examples of this zone are located in the Kananaskis Country Planning Area.)

Zone 7 (Industrial)	To recognize only existing or approved industrial operations, such as coal mines, gas processing plants, cement plants, electric generating stations, and large forest product mills.
Zone 8 (Facility)	To recognize only existing or approved settlement and commercial development areas.

GLOSSARY

Coal Exploration and Development	All activities and infrastructure associated with the exploration, development and production of coal.
Commercial Development	All activities and infrastructure associated with the development of facilities for the use of the general public including fixed-roof accommodation and such things as ski hills and golf courses.
Cultivation	All activities associated with the production of crops for harvest.
Disposition	A lease, licence, permit or letter of authority issued under provincial legislation for activities either surface or sub-surface.
Domestic Grazing	All activities associated with the production and utilization of forage for domestic livestock.
Ecoregion	A unit of the earth's surface characterized by distinctive ecologic responses to climate as expressed by vegetation, soils, water and fauna.
Extensive Recreation	Low-density, dispersed recreational use that does not require sustained recreation management to maintain the recreation opportunities.
Fishing	The removal of fish species under a licence for any purpose including commercial, recreational or domestic use and for management purposes.

Hunting	The stalking of any wild animal for recreational and management purposes or as a source of food.
Industrial Development	All activities and infrastructure associated with the development of an industrial base to accommodate and service the extraction, removal and processing of resources.
Intensive Recreation	High-density recreational use such as developed camp and picnic grounds, swimming beaches, ski hills, golf courses and other sites or areas requiring continuous recreation management and services to maintain the recreation opportunities.
Logging	All activities associated with the removal and transport of timber for manufacture into forest products.
Mineral Exploration and Development	All activities and infrastructure associated with the exploration, development and production of industrial minerals.
Non-motorized Recreation	All recreational activities that do not involve or require the use of motorized equipment.
Off-Highway Vehicle Activity	Winter and summer mechanical transportation used to traverse any area not designated as a highway or improved road way.
Petroleum and Natural Gas Exploration and Development	All activities and infrastructure associated with the exploration, development and production of non-renewable petroleum and natural gas resources.
Primitive Camping	A designated camping area with minimal services and non-motorized access.
Residential	All activities and infrastructure associated with semi-permanent and permanent housing for residents.

Resource	Any part of the environment which society perceives as having value.
Salvage Cutting	A cutting made to utilize dead, downed and injured trees before the timber becomes unmerchantable.
Sanitation Cutting	A cutting made to remove dead, diseased, infested, damaged or susceptible trees to reduce or prevent the spread of insects or pathogens.
Scientific Study	Short or long term research requiring a protected study area.
Serviced Camping	A designated camping area that provides a wide range of facilities and mechanical access.
Step-out Well	A proposed well that, in the opinion of the Mineral Resources Division, Alberta Energy and Natural Resources (based on geophysical, geological or engineering technical data), has a reasonable chance of penetrating the same hydrocarbon-bearing structure discovered by a well drilled prior to July 1977.
Transportation and Utility Corridors	Linear land areas established to concentrate utilities and roads and to provide access for resource use and development.
Trapping	Sustained yield harvest of fur-bearing animals for commercial production of merchantable fur and for management purposes.

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